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BY- ERVIN-TRIPP, SUSAN

CALIFORNIA UNIV., BERKELEY, LANG.-BEHAV. RES. LAB.

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DURING THE PAST FEW YEARS INTEREST IN SOCIOLINGUISTICS, THE SYSTEMATIC STUDY OF THE RELATION OF LINGUISTIC FORMS AND SOCIAL MEANING, HAS GREATLY ACCELERATED. IN CONTRAST TO THE FIELD OF PSYCHOLINGUISTICS, MANY OF THE MAIN FIGURES IN THE DEVELOPMENT OF SOCIOLINGUISTICS ARE LINGUISTS WHO HAVE FOUND THAT SOCIAL FEATURES ARE CONTINUALLY CENTRAL TO LINGUISTIC DESCRIPTIONS. A SECOND DIFFERENCE LIES IN THE DIVERSITY OF SOCIAL SCIENTISTS (ANTHROPOLOGISTS, SOCIOLOGISTS, SOCIAL PSYCHOLOGISTS, PSYCHOTHERAPISTS) WORKING ON SUBJECTS IN THE GENERAL AREA OF SOCIOLINGUISTICS. THE AUTHOR PRESENTS IN THIS PAPER A CONCISE INTRODUCTION TO CURRENT TOPICS IN SOCIOLINGUISTICS. HER PRESENTATION IS NOT HIGHLY TECHNICAL AND IS DIRECTED TO THOSE SOCIAL SCIENTISTS WITH A GENERAL INTEREST IN THIS FIELD. MAJOR CHAPTERS ARE--(1) SOCIOLINGUISTIC RELES (ALTERNATION, SEQUENCE, CO-OCCURRENCE), (2) SPEECH VARIABLES (CHANNEL, PARALINGUISTIC FEATURES, LINGUISTIC FEATURES, SPEECH ACTS, TOPIC, AND MESSAGE, UNITS, RECORDING), (3) LINGUISTIC DIVERSITY (FUNDAMENTALS OF COMMUNICATION, COMMUNICATIVE FREQUENCY, COHESIVENESS AND LINGUISTIC DIVERSITY, IDENTITY MARKING, ATTITUDES TOWARDS SPEECH DIVERSITY, RULES FOR DIVERSITY), AND (4) SWITCHING (PERSONNEL, SITUATION, FUNCTIONS OF INTERACTION, RULES FOR SWITCHING). A 14-PAGE BIBLIOGRAPHY OF REFERENCES IS APPENDED. (JD)

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SOCIOLINGUISTICS

Susan Ervin-Tripp
University of California
Berkeley

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[1] I am deeply indebted to John Gumperz and William Labov for detailed commentary on a draft of this paper, and to Dell Hymes and other members of the Sociolinguistics Committee of the Social Science Research Council, as well as to our work group in Berkeley, for discussions which have radically altered my view of this field. Wallace Lambert and Richard Tucker very generously lent their working tables and draft manuscript.

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[2] "Rules" in this paper are not prescriptive but descriptive. They may not be in conscious awareness. Unlike habits, they may include complex structures inferred from the occurence of interpretable and appropriate novel behavior.

[3] In the system in Figure 1, it is possible to create asymmetrical address by using FN to a familiar addressee who cannot reciprocate because of rank or age difference, and his unwillingness or lack of dispensation, e.g. a domestic servant. E. Hughes has noted a shift from TLN to FN by physicians whose patients move from private fees to Medicare. This usage does not fit into the rule on Figure 1.

Sociolinguistics[1]

Susan M. Ervin-Tripp

University of California, Berkeley

I. Introduction

Group therapy session:

Joe: Ken face it, you're a poor little rich kid.

Ken: Yes Mommy. Thank you.

Class notes No. 11 of Harvey Sacks

Classroom scene:

Mrs. Tripp: Miss Hayashijima?

Student: Yes, sir.

The possibility of insult and of humor based on linguistic choices means that members agree on the underlying restrictions in speech and on the social meaning of linguistic features. Linguistic selection is deeply enmeshed in the structure of society; members can readily recognize and interpret deviations from the norms.

During the past few years, the systematic study of the relation of linguistic forms and social meaning has greatly accelerated. The formal recognition of a field of sociolinguistics has been marked in the United States by courses, programs, seminars and textbooks (Bright 1966, Fishman [in press], Hymes 1964, Gumperz and Hymes 1964, Gumperz and Hymes [in press], Lieberson 1965). In two respects,,the recent history of the field seems different from that of psycholinguistics. Psychologists were largely consumers in the interaction between the fields of psychology and linguistics. Out of concerns that arose from theoretical questions indigenous to psychology, they found that linguistic methods and concepts could provide entirely new ways of accounting for phenomena they had already observed, and raise new questions of great interest to them as psychologists. In contrast, many of the central figures in the development of sociolinguistics are regarded as linguists, and have developed their sociolinguistic concepts because they found social features continually central to linguistic descriptions as they saw them. A second difference lies in the disciplinary diversity of social scientists; it is not clear just what the "socio-" implies in the new field. It will be obvious in this chapter that anthropologists, sociologists, social psychologists, and psychotherapists have all trodden on the terrain we shall define as sociolinguistic, without being aware of each other.

This chapter is confined to micro-sociolinguistics, though some references to larger social phenomena are unavoidable. Sociolinguistics in this context shall include studies of the components of face-to-face interaction as they bear on or are affected by the formal structure of speech. These components may include the personnel, the situation, the function of the interaction, the topic and message, the channel. As Fishman (in press) has pointed out, sociolinguistics is thus distinct from "communication." "It is concerned with characteristics of the code and their relationship to characteristics of the communicators or the communication situation rather than with message or communication functions and processes alone."

During the past decade, psycholinguistics has been profoundly affected by the impact of structural linguistics. Psychologists have come to recognize that verbal output and comprehension are guided by rules,[2] so that unique sentences can be produced and understood by speakers in the same speech community. Currently, performance models are beginning to be developed, which can account for speech, imitation, comprehension and other forms of performance, and studies are beginning of the development of these abilities in children, and of the interpretation of deviant utterances (Chapman (1967) .Ervin-Tripp and Slobin, 1966; Slobin and Welsh, 1967).

In this chapter, evidence will be assembled to show that the rules of verbal output and comprehension must be organized to specify social features. We assume that the next step will be the development of sociolinguistic performance models, studies of socialization and the development of sociolinguistic competence (Slobin, 1967), and research on the interpretation of sociolinguistically deviant behavior.

This chapter has three main sections. The first will provide some detailed examples of what kinds of sociolinguistic rules we can expect to find, the second will define the variables to be measured in the communication process itself, and the third will examine examples of research which have focussed on differences in sociolinguistic rules and on specific features which are components of such rules.

II. Sociolinguistic rules

A. Alternation rules

1. American rules of address

A scene on a public street in contemporary U.S.:

"What's your name, boy?" the policeman asked . . .

"Dr. Poussaint. I'm a physician. . . ."

"What's your first name, boy? . . ."

"Alvin."

--Poussaint (1967) p. 53

Anybody familiar with American address rules can tell us the feelings reported by Dr. Poussant: "As my heart palpitated, I muttered in profound humiliation. . . . For the moment, my manhood had been ripped from me. . . . No amount of self-love could have salvaged my pride or preserved my integrity. . . . [I felt] self-hate." It is possible to specify quite precisely the rule violations committed by the policeman. Dr. Poussaint's overt, though coerced, acquiescence in a public violation of widely recognized rules of address is the source of his extreme emotion.

Brown and Ford's (Hymes, 1964) ingenious research on the American address system has been supplemented by some additions from my own address rules to yield the diagram in

Figure 1. The advantage of such formal diagramming is the greater precision offered over discursive description. The diagram is to be read like a computer flow chart. Thus the speaker, who is assumed to be a competent adult speaker in a western academic community, must check, in order, whether the addressee is a child, whether the situation is very formal, and so on. If the addressee is a child and the name is known, the child is addressed by his first name. For an adult addressee who is a stranger, or whose name is known but who is not a member of a friendship or work group, formal title is used. In other situations the more complex rules obtain. Note that this is, like a grammatical rule, a logical model. It is not intended to be a model of the performance, of the actual decision sequence when a speaker chooses a form of address. The criteria for identifying selectors in a logical model are clearly completely different from the methods of studying how people, in real situations and in real time, make such choices. Two individuals who share the same grammar may not share the same performance rules, and so too, individuals might have somewhat different decision procedures but essentially identical logical structure to their selections.

The following comments will clarify features of the diagram. The entrance point is on the left, and from left to right a series of binary decisions can be read. The outcomes are alternative forms of address. The address forms might fit in frames like, "Look, _____, it's time to leave." According to Scheg loff's studies of telephone conversations, address forms must be distinguished from Summons forms like "Waiter!" though it is clear the rules are nearly identical. The outcomes themselves are formal sets, with alternative realizations. For example, first names may alternate with nicknames, as will be indicated in a later section.

The first choice to be made is whether the addressee is a child or not. In face-to-face address, if the addressee is a child all of the other distinctions can be ignored. What is the dividing line between adult and child? In my own system, it seems to be school-leaving age, at around eighteen. An employed sixteen year old might be classified as an adult.

Status-marked situations are settings such as the courtroom, the large faculty meeting, Congress, where statuses are clearly specified, speech style is rigidly prescribed, and the form of address of each person is derived from his social identity, for example "Your honor," "Mr. Chairman." The test for establishing the list of such settings is whether personal friendships are apparent in the address forms or whether they are neutralized (or masked) by the formal requirements of the setting. There are of course other channels by which personal relations might be revealed, but here we are concerned only with address alternations, not with tone of voice, connotations of lexicon, and so on.

Among non-kin the clearest selector of first-naming is whether alter is to be classified as having the status of a colleague or social acquaintance. When introducing social acquaintances or new work colleagues it is necessary to employ first names so that the new acquaintances can first-name each other immediately. Familiarity is not a factor, between dyads of the same age and rank, and there are no options. For an American assistant professor to call a new colleague of the same rank and age "Professor Watkins" or "Mr. Watkins" would be considered strange.

Rank here refers to a hierarchy within a working group, or to ranked statuses like teacher-pupil. In the American system, no distinction in address is made to equals or subordinates, since both receive FN. The distinction may be made elsewhere in the linguistic system, for example, in the style of requests used. We have found that subordinates receive direct commands in the form of imperatives more often than equals, to whom requests are phrased in other ways.

A senior alter has the option of dispensing the speaker from offering TLN, by suggesting that he use a first name, or tacitly accepting first name. Brown and Ford (Hymes, 1964) have discussed the ambiguity that arises because it is not clear whether the superior, for instance a professor addressing a doctoral candidate or younger instructor, wishes to receive back the FN he gives. This problem is mentioned by Emily Post: "It is also effrontery for a younger person to call an older by her or his first name, without being asked to do so. Only a very underbred, thick-skinned person would attempt it!" (Post, 1922, p. 54). In the American system described in Figure 1, age difference is not significant until it is nearly the size of a generation, which suggests its origins in the family. The presence of options, or dispensation, creates a locus for the expression of individual and situational nuances. The form of address can reveal dispensation, and therefore be a matter for display or concealment in front of third parties.

The identity set refers to a list of occupational titles or courtesy titles accorded people in certain statuses. Examples are Judge, Doctor, Professor, and so on. When the last name of the addressee is not known, the title alone may suffice, but note the following allomorphs:

Father + 0 = Father
Doctor + 0 = Doctor [physician]
Doctor + 0 = 0 [Ph.D., Ed.D., etc.]
Professor + 0 = 0
Mister + 0 = 0
Mrs. + 0 = 0
Miss = 0 = 0

In addition, any older male addressee addressed by this rule as 0 may be addressed as "sir" if deference is intended, as an extra marking which is optional.

This notation means that when an addressee is a priest whose name is unknown, he is addressed as Father, but if a professor, Ph.D., or untitled man or woman is so addressed, he receives no (or "zero") address term. Note that these are my rules,and seem to apply fairly narrowly within the academic circle I know. Non-academic University personnel can be heard saying Professor or Doctor without LN, as can school teachers. These delicate differences in sociolinguistic rules are sensitive indicators of the communication net.

The zero forms imply that no address form is available to follow routines like "yes," "no," "pardon me," and "thank you." Speakers of languages or dialects where all such routines must contain an address form are likely either to use full name or to adopt forms like "sir" and "ma'am," which are either not used or used only to elderly addressees in this system.

One might expect to be able to collapse the rule system by treating kin terms as a form of title, but it appears that the selectors are not identical for kin and non-kin. The rule which specifies that ascending generation only receives title implies that a first cousin would not be called "cousin" but merely FN, whereas an aunt of the same age would receive a kin title as would a parent's cousin. If a title is normally used in direct address, and there are several members of the kin category, a first name may also be given (e.g. Aunt Louise). Frequently there are additional features marked within a given family, such as patrilineal vs. matrilineal, near vs. distant. Whenever the address forms for an individual person's relatives are studied, this proves the case, in my experience.

Presumably the individual set of rules or the regional dialect of a reader of this chapter may differ in some details from the rule reported in Figure 1. Perhaps sociolinguists will begin to use a favorite frame of linguists: "In my dialect we say . . ." to illustrate different sociolinguistic rules. For example, I have been told that in some American communities there may be a specific status of familiarity beyond first naming, where a variant of the middle name is optional among intimates. This form then becomes the normal, or unmarked address form to the addressee.

"What's your name, boy?"
"Dr. Poussaint. I'm a physician."
"What's your first name, boy?"
"Alvin."

The policeman insulted Dr. Poussaint in three ways: He used the term "boy" which, if addressed to a white, would be used only to a child or youth; when told Dr. Poussaint's name he rejected the information by using a term reserved for unknown addressees or menials regarded as non-persons; he insisted that a first name be used. Under no circumstances, according to American address rules, should a stranger address a physician by his first name. Indeed, the prestige of physicians even exempts them from first-naming by used-car salesmen, and physicians' wives can be heard so identifying themselves in public so as to claim more deference than "Mrs." brings. Thus the policeman's message is quite precise: "You, being black, lose adult status and occupational high rank. You are a child." The addressee is stripped of all the deference due his age and rank by a simple rule violation.

Rule violation can carry a message. Without a generally accepted norm, the policeman's act would have lacked its unequivocal impact.

2. Comparative rule studies

The formulation of rules in this fashion can allow us to contrast one sociolinguistic system with another in a systematic way. We can assume that a shared language does not necessarily mean a shared set of sociolinguistic rules. For instance, rules in educated circles in England vary. In upper class boarding schools, boys and girls address each other by last name instead of FN. In some universities and other milieux affected by the public school usage, solidary address to male acquaintances and colleages is LN rather than FN. To women it is Mrs. or Miss + LN by men (not title + LN), and FN by women. Thus sex of both speaker and addressee is important, as it is not in the American system.

In other university circles the difference from the American rule is less; prior to dispensation by seniors with whom one is acquainted, one may use Mister or Mrs. rather than occupational title as an acceptably familiar but deferential form. Note that this is the usage to women by male addressees in the other system. The two English systems contrast with the American one in allowing basically three, rather than two classes of alternatives for non-kin: occupational title +LN, M + LN, and FN/LN. The intermediate class is used for ambiguous cases, the familiar person who must be deferred to or treated with courtesy.

Two Oriental systems of address have been described. The pioneering work of William Geoghegan (in press) describes the naming system of a speaker of Bisayan, a Philippine language. Geoghegan's formal presentation of the system in a talk some years ago was the model for the rules displayed in the figures in this chapter. As in most systems, children routinely receive the familiar address form. The Bisayan system, like the American and English, chooses on the basis of relative rank, relative age, and friendship. But there are important differences. In the United States, all adult strangers are treated with deference; in the Bisayan system, social inferiors do not receive titled address. In the American system for non-kin, added age, like higher rank, merely increases distance or delays familiar address; in the Bisayan system inferiors or friends who are older receive a special term of address uniting informality and deference.

The Korean system is more unlike the American (Howell, 1967). In Korea, relative rank must first be assessed. If rank is equal, relative age within two years is assessed, and if that is equal solidarity (e.g. classmates) will differentiate familiar from polite speech. This system differs both in its components and its order from the American and Bisayan rules. Both inferiors and superiors are addressed differently from equals. Many kinds of dyads differ in authority: husband-wife, customer-tradesman, teacher-pupil, employer-employee--in each case, asymmetrical address is used. Addressees more than two years older or younger than the speaker are differentially addressed, so that close friendship is rigidly age-graded. Solidary relations arise from status, just as they do between equal colleagues in the American system, regardless of personal ties. There are more familiar address forms yet to signal intimacy within solidary dyads. If the English system has three levels, there are even more in the Korean system. Since the criteria were multiple in the Howell study, not a single frame, the comparison is not quite exact.

As Howell points out, the Korean system illustrates that the dimension of approach that Brown and Gilman (1960) called solidarity may in fact have several forms in one society. In the Korean system intimacy is inseparable from solidarity. This separation may also exist in the American system, but in a different way. One is required to first-name colleagues even though they are disliked. On the other hand, as Brown and Ford (Hymes, 1964) showed, nicknames may indicate friendship more intimate than the solidarity requiring FN. They found that various criteria of intimacy, such as self-disclosure, were related to the number of FN alternates, such as nicknames and sometimes LN, which were used to an addressee, and proposed that intimacy creates more complex and varied dyadic relations which speakers may opt to signal by address variants. Thus, in the American system two points of major option for speakers exist: the ambiguous address relation between solidary speakers of unequal age or status, and intimacy. We can expect that systems will vary in the points where address is prescribed or where options exist; Brown and Ford suggest a universal feature, on the other hand, in saying that in all systems frequent and intimate interaction should be related to address variation. This they suggest is related to a semantic principle of greater differentiation of important domains.

3. Two-choice systems.

The brilliant work of Brown and Gilman which initiated the recent wave of studies of address systems was based on a study of T and V, the second person verbs and pronouns in European languages. In English the same alternation existed before "thou" was lost.

One might expect two-choice systems to be somewhat simpler than a system like Bisayan, which in Geohegan's (in press) description gives nineteen output categories. But the number of outcomes can be few, though the number of selectors is many or the kinds of rules relating them complex. Figure 2 gives a description of the nineteenth century rules of the Russian gentry, as I derive them from the excellent analysis by Friedrich (1966), which gives sufficiently full detail to permit resolution of priorities. _Special statuses_ refers to the tsar and God, who seem not to fit on any status continuum. _Status marked settings_ mentioned by Friedrich were the court, parliament, public occasions, duels, and examinations. _Rank_ inferiors might be lower in social class, army rank, ethnic group, or be servants. _Solidarity_ applied to classmates, fellow students, fellow revolutionaries, lovers, and intimate friends. Perhaps it is more properly called familiarity or intimacy, since there does not seem to be the prescription present in the Korean and American solidary relation. A feature of the system which Friedrich's literary examples illustrate vividly is its sensitivity to situational features. Thus T means "the right to use Ty" but not the obligation to do so. Within the kin group, household is of considerable importance because of the large households separated by distance, in traditional Russia.

A slightly later Eastern European system described by Slobin is given in Figure 3. The Yiddish system is somewhat more like the American than like the Russian system, in that deference is always given adult strangers, regardless of rank. However, an older person received deference, despite familiarity, unless he was a member of the kin group. In the American system familiarity can neutralize age.

How have these systems changed? We have some evidence from the Soviet Union. The Russian revolutionaries, unlike the French, decreed V, implying that they wanted respect more than solidarity. The current system is identical to the old with one exception: within the family, asymmetry has given way to reciprocal T, as it has in most of western Europe, at least in urbanized groups. For non-kin in ranked systems like factories, superiors receive Vy and give Ty:

When a new employee is addressed as Ty, she says "Why do I call you 'vy' while you call me 'ty'?" "Kormilitzyn gleefully shoots back a ready answer: 'If I were to call everyone 'vy' I'd never get my plan fulfilled. You don't fulfill plans by using 'vy'." (Kantorovich, 1966), p. 30).

Evidently the upper-class habit of using "vy" until familiarity was established (a system reflecting the fact that the T/V contrast itself came in from above as a borrowing from French) has seeped downward. "A half-century ago even upon first meeting two workers of the same generation would immediately use 'ty'. Today things are different. Middle-aged workers maintain 'vy' for a long time, or else adopt the intermediate form which is very widespread among people within a given profession: 'ty' combined with first name and patronymic" (Kantorovich, 1966, p. 81).

Kantorovich, true to the 1917 decree, complains about three features of the current system: Ty to inferiors regardless of age, Ty to older kin, and first names alone among young acquaintances. Thus he favors the more deferential alternative in each case. Social change in Russia has been relatively slow in sociolinguistic rules, has affected family life more than public life, and has spread the practices of the gentry among the workers.

The Puerto Rican two-choice system in Figure 4 is quite simple since it is a system of children. The data were generously supplied by Wallace Lambert and his collaborators from a large-scale study of comparative address systems in several cultures. Elementary and high school students filled in questionnaires about the forms of address given and received. In this chart, inter-locale and inter-subject differences have been suppressed. The striking feature of this system is that it requires only three discriminations. It is likely, of course, that adult informants would elaborate further details. Intimacy in this system refers to close ties of friendship, which can occur with others of widely varying age, e.g. with godparents, and is quite distinct from solidarity, which arises from status alone. Adolescent girls, for example, do not give "tu" to a classmate unless she is a friend.

Lambert and his collaborators have collected slightly less detailed data from samples of schoolchildren in Montreal, from a small town in Quebec, from Mayenne, France, and from St.-Pierre et Michelon, an island colony with close ties to France, much closer than to nearby Canada.

The system of kin address varies considerably. In both Mayenne and St. Pierre, all kin and godparents receive "tu." In Quebec, the urban middle class is moving in this direction, but the lower class and the rural regions from which it derives retain an address system like Puerto Rico's in which distance (including age) within the family is important. In some families, even older siblings receive "vous." It is not clear why such extensive differences between families exist, except that one would expect this to be the case under conditions of change. For kin address, of course, the sanctions are intra-family, so one would expect between-family differences to be greater than in non-kin address. Generally "intimate" means parents, then aunts, uncles, and godparents, then grandparents. Some inter-family differences might be accounted for by finding which family members live in the household, which nearby, and which far away.

Sex of addressee appears to be a feature of adult systems, or may influence the probabilities of intimacy where there is a selector. In Quebec, adults generally give "tu" to children and young men regardless of familiarity. In St. Pierre, except to upper-class girls who are less likely to receive "tu" under any conditions, acquaintance legitimizes "tu," and is necessary even in addressing children. In Mayenne, middle class little boys said they received "tu" from everyone (and reported often reciprocating to strangers), but otherwise familiarity seems to be required, as in Puerto Rico, in the Mayenne system. Boys generally receive T from employers, and in the country and the urban lower class receive T from service personnel. It should be noted that the analysis from the children's standpoint of what they think they receive is an interesting reflection of the fact that people know what they should say themselves, and they also expect some standard form from others. In analyzing the adult rule systems, however, the children's data are not the best; the adults of rural or lower class background may have different rules (e.g. service personnel?) than others.

The compressed presentation here of Lambert's work has indicated several directions for research on social criteria of address selection. Lambert has shown that these rules are sensitive indicators of differences between social groups, and of social change. One must look beyond the address system for independent social features correlated with address systems of a defined type. In order to do such studies, a clear-cut formal system for typing properties of address systems (like language typologies) is necessary.

Lambert (1967) has discussed the development of address rules with age. There are several interesting problems in the learning of these systems, one being the visibility of the various social selectors. One can assume the rank gradations in an adult system might be learned late (at least in terms of generalizability to new addressees), as would generation differentiations not highly related to age. A second problem emphasized by Lambert is the system of alternation itself. Children in most language communities learn fairly early to employ the asymmetry of first and second person (for a case study see McNeill, 1963). Thus if they always received T and gave V there might be less difficulty; however they see others exchanging reciprocal V and T as well as asymmetrical address, and they give T to some alters. These problems could be studied in natural language communities where the language structure provides different category systems and social selectors (Slobin, 1967).

4. Shifting

When there is agreement about the normal address form to alters of specified statuses, then any deviation is a message. In the case of Dr. Poussaint, both parties knew that the system required title to a physician; the policeman's use of "boy" and "Alvin" denied both rank and age. In the Russian system, the existence of numerous criteria of address permits the expression of delicate nuances of relationship. Friedrich gives convincing cases of momentary shifts at times of personal crises. He points out that in a public setting, friends would mask their intimacy with V; in talking of personal topics they could invoke their friendship with "ty," remove it for impersonal topics with "Vy."

Kantorovich (1966, p. 43) gives similar examples in current practice: "I say 'ty' to my subordinates, but I certainly don't do this in order to belittle them. I know that they'll answer me with 'vy,' but this isn't grovelling--it's a mark of respect . . . Somebody I call 'ty' is somehow closer to me than someone I have to call 'vy'. . . . If I get mad at one of my workers, and he needs a bawling out, I frequently switch to 'vy'. . . ." Kantorovich also mentions that two businessmen who normally exchanged "ty" switched to "vy" and the first name + patronymic when help or advice was needed.

In systems with age or rank asymmetries of address, the use of the more deferential form to an equal or subordinate can either mean that they are receiving respect, or being put off at a distance. To account fully for the interpretation of such actions by the receivers, we need to know the other signals, such as tone of voice, other address features, and the available ambiguities of the relationship. In the case of courtship, for example, the important dimension is closeness or distance, and address changes would be so interpreted.

5. Socialization

Adults entering a new system because of geographical or occupational mobility may have to learn new sociolinguistic rules. A contrastive analysis of formal rules, in combination with a theory of social learning, would allow specification of what will happen.

First, we can predict what the speaker will do. We can expect, on the basis of research on bilinguals (Ervin-Tripp, in press) that the linguistic alternatives will at first be assimilated to familiar forms, to "diamorphs." Thus a Frenchman in the United States might start out by assuming that Monsieur = Mister, Madame = Mrs. and so on.

However, the rules for occurrence of these forms are different in France. In polite discourse, routines like "merci," "au revoir," "bonjour," "pardon" do not occur without an address form in France, although they may in the United States. One always says "Au revoir, Madame" or some alternative address form. "Madame" differs from "Mrs." in at least two ways. Unknown female addressees of a certain age are normally called "Madame" regardless of marital status. Further, Mrs. + $\emptyset = \emptyset$. Madame + $\emptyset$ = Madame. As a matter of fact, the rule requiring address with routines implies that when LN is not known, there cannot be a "zero alternant"--

some form of address must be used anyway, like the English "sir." As a result of these differences in rules, we can expect to hear elderly spinsters addressed as "Pardon me, Mrs."

How do listeners account for errors? We have suggested earlier that shifting at certain points in sociolinguistic rules is regularly available as an option. Normally it is interpreted as changing the listener's perceived identity, or his relation to the speaker. The result may be complementary, as "sir" to an unknown working class male, or insulting, as "Mommy" to an adolescent male. If the learner of a sociolinguistic system makes an error that falls within this range of interpretable shifts, he may constantly exchange predictably faulty social meanings. Suppose the speaker, but not the listener, has a system in which familiarity, not merely solidarity, is required for use of a first name. He will use TLN in the United States to his new colleagues and be regarded as aloof or excessively formal. He will feel that first-name usage from his colleagues is brash and intrusive. In the same way, encounters across social groups may lead to misunderstandings within the United States. Suppose a used-car salesman regards his relation to his customers as solidary, or a physician so regards his relation to old patients. The American using the rule in Figure 1 might regard such speakers as intrusive, having made a false claim to a solidary status. In this way, one can pinpoint abrasive features of interaction, across groups.

Another possible outcome is that the alternative selected is completely outside the system. This would be the case with "Excuse me, Mrs." which cannot be used under any circumstances by Rule 1. This behavior is then interpreted by any additional cues available, such as the face, dress, or accent of a foreigner. In such cases, if sociolinguistic rules are imperfectly learned, there may be social utility in retaining an accent, wherever the attitude towards the group of foreigners is sufficiently benign so it is better to be so designated than to risk insulting or offending addressees.

6. Integrated sociolinguistic rules

The rules given above were fractional. They were selective regarding the linguistic alternations accounted for. They defined only specific linguistic entries as the universe of outcomes to be predicted. If one starts from social variables a different set of rules might emerge. This is the outlook of William Geohegan (in press), William Goodenough (1965), and Dell Hymes (1964) who suggest taking "a specific or universal function, such as the distinguishing of the status or role of man and woman, derogation, respect, or the like, and investigating the diverse means so organized within the language habits of the community, . . . [rather than] looking for function as a correlative of structure already established."

Using such an approach, Goodenough examined behavior towards a range of statuses, and found that it was possible to rank both the statuses and the forms of behavior into Guttman scales and equivalent classes, grouped at the same scale point (1965). In this way, various kinds of verbal and non-verbal behavior can be shown to be outcomes of the same social selectors.

Deference, the feature studied by Goodenough, may be indicated by pronoun alternations, names or titles, tone of voice, grammatical forms, vocabulary, and so on (Capell, 1966, pp. 104ff; Martin, in Hymes, 1964). Deferential behavior may in some systems only be realized in special situations such as in introductions or in making requests. If one compares an isolated segment of two sociolinguistic systems, it cannot legitimately be concluded that a given social variable is more important in one system than the other. It may simply be realized through a different form of behavior.

It is not clear how the different realizations of social selectors might be important. Address, pronominal selection, or consistent verb suffixing (as in Japanese) can be consciously controlled more readily, perhaps than intonation contours or syntactic complexity. Frenchmen report "trying to use 'tu'" with friends. Such forms can be taught by rule specification to children or newcomers. Forms which allow specific exceptions, or which have options so that too great or too little frequency might be conspicuous, cannot be taught deliberately so easily. Such rules can be acquired by newcomers only by long and intense exposure rather than formal teaching.

Some alternations are common and required, others can be avoided. Howell reports that in Knoxville, Tennessee, Negroes uncertain of whether or not to reciprocate FN simply avoided address forms to colleagues (Howell, 1967, pp. 81-83), just as Brown and Ford noted in the academic rank system. In a pronominal rank system, like French or Russian, such avoidance is impossible. Among bilinguals, language switching may be employed to avoid rank signalling (Howell, 1967; Tanner, 196). The avoidable selector can be considered a special case of the presence of options in the system. Tyler (1965) has noticed that morphological deference features (like the Japanese) are more common in societies of particular kinship types, such as lineage organization.

The above description was primarily made from the standpoint of predicting a speaker's choice of alternatives in some frame. It is also possible to examine these rules from the standpoint of comprehension or interpretation, as have Blom and Gumperz (in press) in their discussion of social meaning. Just as one can comprehend a language without speaking it, as actors we can interpret the social meaning of the acts of others without necessarily using rules identical to our own. The relation between production and comprehension rules remains to be studied.

B. Sequencing

1. Leave-taking

> After an introduction, when you have talked for some time to a stranger whom you have found agreeable, and you then take leave, you say, 'Good-by, I am very glad to have met you,' or 'Good-by, I hope I shall see you again soon'—or 'some time'. The other person answers, 'Thank you,' or perhaps adds, 'I hope so, too.'
>
> —Emily Post, (1922, p. 9)

The sequential events mentioned in this description are Introduction + Conversation + Leave-taking. Leaving aside the components of the first two, elsewhere specified, Leave-taking has two parts, for the two actors.

Leave-taking → LT 1 + LT 2
LT 1 → Goodbye + CP
CP → I am very glad to have met you
I hope I shall see you again {soon / some time}
LT 2 → Thank you (+ I hope so, too).

This is a notation, borrowed from grammars, of indicating a phrase structure rule. The plus marks indicate sequential events, the arrows expansions or replacements in the "derivation tree" to be read as "rewrite Leave-Taking as LT 1 + LT 2," the brackets alternatives, and the parentheses optional elements. The more general rule states that introduction always precedes the other two events. Presumably the rules will indicate that while introduction and leave-taking are relatively fixed routines, conversation can be expanded to hours. We can regard these routines as transition markers between speech events.

2. Summons sequence

A phone rings in Jim's home:

Jim: Hello.

George: Hi, how are you?

Jim: O.K., but listen. I'm in a phone booth and this is my last dime. Barbara's phone is busy and I won't be able to meet her at seven. Could you keep trying to get her for me and tell her?

George: What the hell are you talking about?

Adapted from Scheg loff (in press)

Jim was a sociology student who was trying to violate rules of telephone conversation. The rules derived by Schegeloff from a large sample of phone conversations can be characterized as follows:

Summons Sequence → Summons + Answer + Continuation + Response

$$\text{Summons} \qquad \left\{\begin{array}{l}\text{Courtesy Phrase [to stranger]} \\ \text{Attention-call [non-stranger]} \\ \text{Telephone bell} \cdots\end{array}\right\}$$

Answer [phone] → Greeting 1 (+ Identification [office])

Continuation → (Greeting 2) + (Ident.) + Message

Response → (Deferral +) Reply to message

Following every summons there are three phases to complete the cycle. The omission of any part, if a second party is present, is unusual and must be accounted for. The summons can be realized in a variety of ways, depending on whether alter is physically present, known, and so on. To a stranger one might say "pardon me!" or "hey!" Attention-calls include "waiter!" "Dr. Conant!" "Joe!" Their selection rules would be close to Figure 1.

Alter must answer a summons. Jim had intended to pick up the phone and remain silent, but failed. Lecturers may find it hard to ignore waving hands in the audience. If there is non-response, the summons is repeated. On the phone: "Hello...Hello...Hello?....Hello!" There are definite limits (longer for children) for such repetitions of summonses.

The next major step is that following the limited routines of exchanging greetings, the caller gives a message, explaining his reason for calling. In the example, Jim tried to play the role of caller rather than called. He did this by not giving George a chance to give a message, and by giving a message, itself semantically deviant and appropriate only to George's status as caller.

If the caller did not intend a summons, or if his need has vanished, he fills the Continuation position with an account: "Never mind." "I was just saying hello." "I was just checking the phone." If he states a request, alter must respond.

We have not stated the rule in its full detail. The realizations of Greeting 1 vary, according to circumstance. Thus the alternatives might be "Yes" on an intercom, "Good morning, Macy's" for a receptionist on an institutional telephone, "Hello" on other outside phones. Greeting 2 has different alternation sets than Greeting 1, for example "Hi" to a friend, "How are you" to a friend, "Hello" to others. Thus the realizations of particular units in the sequencing rules may involve alternations which are dependent on social features. Also, some of the optional positions may be selected or omitted by social criteria.

The selection of certain alternates may entail an expansion at that position in the sequence. For example, if "How are you?" occurs as the Greeting 2 realization, the addressee must reply. The result may be an imbedded interchange about his health. The called person at this point, like anyone asked this question, has two options. He can either give a routine response to non-intimate alters, such as "OK," or "Fine." Or, if the alter is a friend, he has the option of checking the real state of his health and mood and replying truthfully. Indeed, he may be obligated to do so, since a close friend might be insulted at not being informed of his broken leg at the time of the conversation rather than later. Sacks has described the routine response as an obligation to lie, but formally it is a neutralization of the semantic selection feature--simply a briefer route.

If Greeting 2 establishes that the caller is a friend, the addresses has the option of providing a new greeting which is for a friend, as Greeting 1 was not:

Hello.
Hi Joe, How are you?
Oh hi. I'm O.K......

Note that by this system, "hi" is more intimate than "hello." Not so in 1922, when Emily Post said that "hello" is "never used except between intimate friends who call each other by the first name" (1922, p. 19).

In the conversation just cited, identification is through the channel of voice recognition. Between strangers, identification is required, according to Sacks' evidence (in press). Sacks has pointed out that self-identifications, introductions, and third-party categorizations are important social devices. Since everyone has many statuses, the selection in each case where a status (other than a proper name) is given follows certain fixed rules, among them consistency with other choices. In a series of such events in the same situation, the categories tend to be members of the same contrast set, e.g. occupations.

3. Invitation sets

Slots in the sequences such as the summons sequence are not necessarily recognized by the speakers or labeled by them. Sacks, for example, has cited in lectures the observation in considerable taped material that many encounters include an optional sequence at a time when a newcomer enters a group or a dyad begins conversation. These he calls pre-invitation, pre-invitation/rejection, invitation, and rejection.

a. Pre-invitation.

"Hello? Hello. What are you doing?"
"Nothing."

The called person interprets the question as a preliminary to an invitation. If the reply is "nothing" the caller might suggest coming over, might launch into a long conversation, and so on. The called person does not talk about the things he is doing that are irrelevant to the supposed invitation.

b. Pre-invitation/rejection

"Can I see you for a moment?"

"What do you want?"

The question is designed to gather information suitable for deciding about offering an invitation or a rejection. So too, according to Sacks' analysis, the sequence in Pittenger, Hockett, and Danehy's The First Five Minutes:

Therapist: What brings you here?

Patient: I don't feel like talking.

Sacks observes that the patient knows that her acceptability for therapy depends on her answer, also that she must reveal her private concerns to someone who is not yet defined as her regular physician, appropriate to such disclosures. Here the open-ended question underlines the ambiguity of the new relationship.

c. Rejection

When a wife greets her husband by announcing that her visiting friends are discussing nursery schools or the sewing circle, she implies his absence would be welcome. In this act, the wife asserts that the activity of the group is bound to a category of which he is not a member.

d. Invitation

Sacks cites the late arrival of a member to a group therapy session:

Hi. We were having an automobile discussion.
....discussing the psychological motives for....
drag racing in the streets.

Here the latecomer was invited into the conversation by three members in one sentence.

Emily Post refers to such practices as "including someone in conversation," and suggests it can be done without an introduction, for example, by saying to a friend who arrives during a conversation with a gardener, "[Hello, Gladys,] Mr. Smith is suggesting that I dig up these cannas and put in delphiniums." This is evidently a semi-introduction, since it allows the superior to address the inferior, but without the implication of equality lying in a full introduction.

These four slots are not recognized by speakers as such. Their function in the conversation can be seen by testing the effect of their omission or alteration.

4. Narratives

Labov and Waletzky (1967) recently presented a framework for the analysis of informal narratives, or oral versions of personal experience. Narratives, whether formal or casual, involve problems of sequencing par excellence, since it is inherent in the problem of narration that the hearer must understand the sequence in the referent events. The article defines a series of clause types in terms of their permutation properties relative to each other. The preservation of causal relations implied by narrative sequence is evident as early as six, according to Brent and Katz, in very simple tasks (1967). A basic contrast in the analysis of Labov and Waletzky is between free clauses, which could occur anywhere in the narration (e.g. descriptions of character of hero), and clauses which must occur before, after, or between certain others, which define their displacement range.

By utilizing the units of this formal analysis to characterize the whole narrative sequence, they were able to identify five portions in the maximally expanded narrative, which they call orientation, complication, evaluation, resolution, and coda. The minimum possible narrative has only complication. While they noted that the amount of narrative structure used beyond the minimum was related to the verbal skill of the speaker, it is also apparent that differences of group styles, age, and so on would be profitably examined through such formal means.

5. Tying rules

In his lectures in class, Sacks has discussed many details of sequencing within conversations. One problem has to do with the sequence of speakers. In a dyadic conversation, he has found that the rule is alternation of adequate complete utterances between the two speakers. But in larger groups, more complex patterns obtain. The next speaker may be indicated by asking a question. Then the addressee has the right to the floor whenever he chooses to talk, and the asker has the right after the responder. The rule is such that other material can intervene between question and response. "When I've asked a question, then the pause between my talk and yours is your silence," according to Sacks. Thus a question is a "first speaker form" since it implies a second speaker is called on. So, in the groups he has studied, is an insult.

Second speaker forms include pronouns tying back to earlier utterances, and pro-verbs. Some forms are even more complex, as "I still say, though . . ." which implies a third activity of which some prior one was done by the same person.

The result of using the sequence features Sacks has discussed is that a great deal of information can be obtained from single utterances. In the example, "Ken face it, you're a poor little rich kid," he points out that we know that Ken is the addressee, that Ken now has the right to speak, that he has the right to give an insult to the speaker, and that some categorization device (e.g. Mommy) in a contrast set with "kid" is likely.

6. Speech event analysis.

Sequence rules are appropriate for the description of what may be called speech events, which in turn may be parts of or coterminous with focused interaction (Goffman, 1963). Traditionally, anthropologists were aware of such organized units only in the case of ceremonies and tales, where preservation of the same thematic sequences or even the same wording was highly valued. These repeated routines were of course obvious even to the most casual observer. The Book of Common Prayer, for example, clearly labels each speech event, its components, and the alternatives at each point.

Frake (1964) has given a detailed account of a complicated event, a drinking encounter among the Subanun. But even so simple a sequence as a short telephone conversation, as Scheg loff has shown, has underlying structural rules. These rules refer to abstract categories not evident on the surface of behavior. Since multi-party interactions must be even more complex, we can assume that the rules for such encounters will not be simple. At least, one cannot expect that the rules of speech events are any simpler than the grammar of sentences.

Frake (1964) identified segments of the speech event as discourse stages. Components of the stages or coterminous with them are exchanges, which Frake defines as "sets of utterances with a common topic focus," probably similar to Watson and Potter's (1962) episodes. Speech acts are utterances or utterance-setsswith an interpretable function. Examples might be the routines that can mark the boundaries of episodes, such as "That reminds me . . ." promises, jokes, apologies, greetings, requests, insults.

Some of the features of order between these units have been considered in the context of narration by Labov and Waletzky (1967) and others. The displacement sets and other categories they have defined for clauses can also apply to other units, such as speech acts. Where displacement occurs, of self-identification for instance, it may be marked by special routines, "By the way, my name is---" which would not be used except for the deviation.

The categories which Scheg loff and Sacks discuss are sufficiently general in many cases so that one can expect them to be found universally. The summons sequence is a good candidate. Scheg loff shows, with respect to telephone conversations, that the basic rules he gives, with called answering first, caller providing initial topic, and so on, are required by the distribution of information at the start. On the other hand, the specific selections available within each formal category in this case are likely to be highly culture- or group-specific. The strategy for the discovery of alternations and of sequencing rules is similar. In the latter case, one tests the response of members to omissions or permutations, rather than to substitutions.

C. Co-ccurrence rules

1. Types of rules

How's it going, Your Eminence? Centrifuging OK?

Also have you been analyzin' whatch'unnertook
t'achieve?

The bizarreness of this hypothetical episode arises from the oscillations between different varieties of speech. It violates the co-occurrence rules we may assume English to have.

Co-occurrence rules are of two kinds. One might be called vertical, since they restrict the realization of items at different levels of structure. For instance, a given syntactical form might only be used with certain lexicon, and uttered with a given set of phonetic values. The most extreme case of such restrictions lies in the well-practiced bilingual who uses French syntax and pronunciation for French vocabulary and English syntax and pronunciation for English vocabulary.

In the example, the following are instances of vertical non-restriction:

a. "How's it going" is a phrase from casual speech, but the súffix "-ing" is used, rather than "-in" which is normal for casual speech.

b. An elliptical construction is used in the second utterance, which contains only a participle, but the formal "-ing" appears again.

c. A technical word, "centrifuge" is used in the elliptical construction.

d. The "-in" suffix is used with the formal "analyze."

e. Rapid informal articulation is used for the pedantic phrase "undertook to achieve."

Horizontal restrictions occur at the same level of structure, and might be lexical or structural. The vocabulary in the example oscillates between slang and technical terms, the syntax between ellipsis and parallel non-ellipsis. In bilingual speech one may find structural restrictions which are independent of lexicon, as an example, provided by John Gumperz, of Pennsylvania German:

Di kau ist over di fens jumpt,

Here the syntax and grammatical morphemes are German, lexicon English. Horizontal co-occurrence restrictions on function morphemes are common, with lexical switching and phrase-switching allowed. Diebold (1963) also gives examples in which Greek-Americans who can speak both languages with "perfect" co-occurrence rules, if they employ English loan-words in the Greek discourse, realize them in the Greek phonological system. This would suggest that horizontal phonological restrictions over-ride vertical realization rules, for these speakers.

One of the startling aberrations in the example is the use of slang to a cardinal. We would expect to find that deferential address forms would be related to formal style. One pictures a cardinal in a microbiology laboratory addressed by a janitor who knows technical terms, but cannot fully control formal syntax and phonology! Like ungrammatical sentences, sociolinguistically deviant utterances can seem more normal if one can define setting and personnel to locate them.

That address forms may indeed restrict co-occurrent style is suggested by a study in a medical laboratory which found that "Hey, Len, shoot the chart to me, will ya?" was in alternation with "Do you want the chart, Doctor?" The only difference was the presence of outsiders in the second case.

The most extreme forms of co-occurrence restrictions are likely to be found in ritualized religious speech in traditional societies. Here it would be blasphemous to utter the wrong speech. Indeed, Gumperz has suggested that linguistics first began with the Sanskrit scholars' efforts to identify the formal features of religious texts and transmit them unchanged.

At the opposite extreme are the conditions in American college lecturing, where technical terms, slang, and informal and formal syntax may alternate to some extent. Friedrich also gives examples (1966) of delicate communication of changing relationships by shifts within conversations.

2. Style

a. Formal style

Style is the term normally used to refer to the co-occurrent changes at various levels of linguistic structure within one language. The vertical properties of such shifts have been pointed out by Joos (1962). Hymes (1964) has commented that probably every society has at least three style levels: formal or polite, colloquial, and slang or vulgar. Joos, in an introspective account, identified five levels of English; unless restrictions are relatively strong, it will probably be difficult to segregate and count separate levels, on the basis of linguistic evidence alone.

If Hymes is right about a polite style which contrasts with the unmarked colloquial, it might be proposed that this is the style preferred in public, serious, ceremonial occasions. Co-occurrence restrictions are particularly likely, because of the seriousness of such situations. The style becomes a formal marker for occasions of societal importance where the personal relationship is minimized. We would expect that the distant or superior form of address and pronoun is universally employed in public high style. In Figures 1 and 2 "status-marked situations" which call for titles and V may also call for polite style. Thus speakers who exchange colloquial style normally might change to this style in certain public occasions, such as funerals or graduation ceremonies.

It might in general be the case in English that in otherwise identical situations, an alter addressed with TLN receives polite style more than one addressed with FN. Howell (1967, p. 99) reported such correlations in Korean.

Formal lexicon and "-ing" should be related. Fischer (Hymes, 1964) found that "criticizing, visiting, interesting, reading, correcting" and "flubbin, punchin, swimmin, chewin, hittin" occurred in a single speaker's usage. It is not clear here whether it is lexical style or topic that is at issue, since there were no examples of denotative synonyms with different vocabulary. Such examples, of the sort given in Newman (Hymes, 1964), and found plentifully in English lexicon for body functions (e.g. urinate vs. weewee) provide clearer evidence for co-occurrence restrictions between lexicon and structure.

Labov (1966) did include "ing" vs. "in" in his study of style contrasts in different social strata, and found it worked precisely as did the phonological variables. Polite style in a speaker might require a certain higher frequency (Fig. 5, 6) of [r], of [ð] rather than [d] in, e.g., "this," and of "-ing." While the variables differentiating polite from casual style tended to be the same in different classes, the precise frequency reached for each variable varied (Labov, 1966). Thus his evidence suggests co-occurrence rules for grammatical morphemes and phonology. Labov's book (1966) and Klima (1964) consider the formal description of phonological and syntactic style features, respectively.

b. Informal style

In trying to sample different styles while interviewing, Labov made the assumption that speakers would use a more formal style during the interview questioning than at other times. He used several devices for locating such shifts contextually: speech outside the interview situation, speech to others usually in the family, rambling asides, role-playing (specifically getting adults to recite childhood rhymes), and answers to a question about a dangerous experience. He found that when "channel cues" (changes in tempo, pitch range, volume or rate of breathing) indicated a change to casual or spontaneous speech within a speech episode, the phonological features changed. In the examples illustrating the shifts, lexicon and syntax changed too.

It is commonly the case that as one moves from the least deferent speech to the most, from the informal to the ceremonial, there is more elaboration and less abbreviation. Probably this difference is a universal, for two reasons. One is that elaboration is a cost, and is therefore most likely in culturally valued situations or relationships (Homans, 1958). The other is that a high degree of abbreviation is only possible in in-group communication. While ceremonials may be confined to a sacred few, wherever they have a public function and must communicate content we assume this principle of elaboration holds. Elaboration could be defined with respect to a surface structure, or to the complexity of imbedded forms in the syntax, or some such criteria. A very brief poem might in fact, in terms of rules and "effort" of compression be more complex than a discursive report of the "same" content. Some forms are unambiguous: suffixed vs. unsuffixed forms, as in Japanese honorifics, or polite verb suffixes; titles vs. non-titles, and so on.

From a formal grammatical standpoint, ellipsis is more complex than non-ellipsis, since the grammar must contain an additional rule. It is not clear how ellipsis might be handled in a performance model. However, ellipsis in the syntactical sense is clearly more common in informal speech. Some examples can be given from questions and answers:

Do(you(want(more cake?
I would like more cake.
I'd like more cake.
I would.
Me.

From Soskin and John's text of a married couple we find the following:

Bet you didn't learn it there.
Your name? (from attendant)
Want me to take it . . .
Wanna take your shoes off?
Getting seasick, dear?
Think I can catch up with them?

Not that way!

Directly into it.

The formal rules for sentence contractions and ellipsis are readily written.

Another form of ellipsis is that used in conversational episodes in second-speaker forms or to complete one's own earlier utterances. From Soskin and John (1963):

That fish, Honey.

But I have a handicap.

Like this?

Which? This? Down here?

You should be able to.

Undulating!

Yeah, if you want to.

Rowed!

With both of them!

Well, you wanted to.

You sure are.

Well, I could.

These forms of ellipsis are learned. Brent and Katz (2967) found that pronominalization was rare in young children; it is obligatory in second speaker rules. Bellugi (1967) found also that contractions are later than uncontracted forms in children.

Semantic compression is also available, in casual speech among intimates, as will be evident later.

Phonetically a form which occurs in casual speech more than in polite styles is rapid speech, which entails horizontal restrictions.

What are you doing?	[hwəṭar ju 'duwɨŋ.]
Whaddya doin?	[hwədjɨ 'duwɨn.]
Whach doon?	[wəč 'dun]

There are regular phonetic alternations related to rate, e.g.:

1. Retention of syllable of major stress and peak pitch.
2. As degree of speeding increases, loss of weakest stress.
3. Loss or assimilation of semi-vowels.

   [r] in post-vocalic position lost.

   [d] + [j] ——→ [ǰ]   e.g. Whadja do?

   [t] + [j] ——→ [č]   e.g. Whacha doin?
4. Marginal phonological distinctions like /hw/ vs. /w/ may be lost, perhaps part of casual speech style.
5. Unstressed vowels centralized.

There is a reverse set of rules available to speakers used to the above alternations. The extra-slow style may be employed in sounding-out for a dictionary or over the telephone. Thus normal "school" may become slow [sɨkuwɨl].

c. Baby talk

In many languages a special style is employed in speaking to infants, which changes its features with the age of the child. A comparison cross-linguistically of these styles has been made by Ferguson (1964). In English, baby-talk affects all levels of structure.

Most speakers are likely to be conscious of baby-talk lexicon, as they often are of the lexical features of styles. Baby lexicon includes words like potty, weewee, bunny, night-night, mommy, daddy. Many other words in adult speech become appropriate for speaking to infants when the suffix "-ie" is added. We know little of the syntax of talk to children, but it seems probable that it is at least simpler than other speech, and includes more noun phrases and possibly in some cases omissions of function words, as in "Dolly pretty?"

Phonological effects and paralinguistic features are especially conspicuous. Samples of talk to infants show certain general phonetic changes such as palatalization. Most striking is the higher pitch the younger the infant, and the use of a sing-song, wide-ranging intonation. Observations of the social distribution of this style show it more common in addressing other people's children than one's own. For instance, nurses use the paralinguistic features at least, in persuading children, and in cooperative nurseries comparison of own-child and other-child addressees shows a distinct shift to more age attribution to own child.

Children themselves use many of the features of adult baby talk very early. In addressing younger siblings they may adopt lexical and paralinguistic features of the adult baby talk as early as two. In role play they use phrases and address terms from baby talk, e.g. "Goo-goo, little baby," and freely employ the sing-song intonation in addressing "babies." In other respects their role play is stereotyped rather than strictly imitative, for example in the frequent use of role names, and it may be that the use of the intonational and lexical features of baby talk may function simply as role markers in their play.

3. Registers and occupational argots

Husband: Whaddya say you just *quit* . . .

Wife: I can't simply *quit* the airlines because *notice must* be *given*, but I'll certainly take what you *say* into *consideration*, and *report* it to my *superiors*. . . .

Husband: I don't *know* you. I don't feel *close* to you.

Wife: Well, I'm *awfully sorry*. There's *nothing* I can do right now because I *am* preparing a *meal*, but *if* you'll wait until *after* I've made the *beverage*, perhaps--

Husband: I can't *stand* it. I want *out*, I want a *divorce*!

Wife: Well, if you *do feel* that way *about* it, I'd suggest you *wait* until perhaps *three* P.M., when I *will* be *back* from shopping at the beautiful *Saks* Fifth *Avenue*.

Husband: Eileen, you don't understand, I want a divorce!

Wife: Well, all I can say is, it's been nice having you aboard--

(Nichols and May, 1959

In the above stage scene, the italicized items received stress, but not exaggerated stress. The wife spoke with a full-throated unctuous voice. The register of airlines or tourist businesses is revealed in lexical choices like meal, beverage, and aboard, and "preparing a meal" rather than "getting breakfast." Register primarily is reflected in lexicon, since different topics are required in different milieux. However, in this case the paralinguistic features also change, including stress on words like "must, am, if, after, do, about, will, back," which would usually not be stressed.

Slang is similar to register variation in that the alternates are primarily lexical. As Newman (Hymes, 1964) has pointed out, the actual forms used are not necessarily different, but in sacred or slang contexts they take on a different meaning, so in speaking of slang vocabulary one must include both form and its semantic features. Since slang is highly transitory by definition, it will be understood and correctly used only within the group or network where it developed or to which it has moved at a given time. Thus one might predict that the selection rules for slang should restrict it to addressees to whom one claims a solidary relation. By this interpretation, a college lecture laced with slang is a claim on the identification of the audience. The nature of co-occurrence restrictions with slang needs investigation.

4. Linguistic repertoire

Co-occurrence restrictions refer to the selection of alternates within the repertoire of a speaker in terms of previous or concomitant selections. The range of alternates should be known in a study of restriction. In an American monolingual, the range is likely to include the styles mentioned above, and perhaps an occupational register. Labov (1964) has pointed out, however, that it is rare to control a very wide stylistic range unless one is a speech specialist, and that upwardly mobile persons usually lose the "ability to switch 'downwards' to their original vernacular" (p. 92).

In many parts of the world, a code that is relatively distinct from the casual vernacular is used in formal situations. This condition, called "diglossia" in Ferguson's (Hymes, 1964) classic article, may, because of the greater code difference, be accompanied by more co-occurrence restriction than is style shifting, where the common features of the styles may outweigh their differences. Examples, where the codes are related are Greece, German Switzerland, Haiti, and Arab countries. Standard languages co-existing with local dialects are somewhat less distinguished, and historically the dialect does not usually maintain itself except phonetically, though there may be ideological resistance to borrowing from the standard (Blom and Gumperz, in press).

Where diglossia takes the form of bilingualism (Fishman, 1967), one might at first assume that the co-occurrence restrictions would primarily govern the high form. Such a condition exists in many American bilingual communities, with English as the high form. However, these are not usually pure cases, since English is the vernacular if there are casual contacts outside the immigrant community. Under these conditions there can be considerable interpenetration (Gumperz, 1967; Ervin-Tripp, in press).

Co-occurrence restrictions in common-sense terms refer to "language-mixing." Some bilingual communities have strong attitudinal opposition to switching (usually they mean lexical co-occurrence). Blom and Gumperz (in press) found that in a Norwegian village speakers were unconscious of the use of standard forms, and were very upset to hear tapes showing lack of co-occurrence restrictions in behavior. In practice, the maintenance of coordinate or segregated systems depends on social factors. Coordinate bilingualism is possible if there is a complete range of equivalent lexicon in both systems, and social support for the bilingualism. If this is not the case, some topics cannot be discussed, some emotions cannot be conveyed, and borrowing, perhaps surrounded by a routine disclaimer frame, will occur. The other social conditions permitting such segregation in diglossia are the closed network circumstances reported by Blom and Gumperz (in press), where certain topics and transactional types simply would not occur in casual discourse. Thus American researchers can find rich grounds for the study of behavioral support or loss of co-occurrence rules, either in English style, registers, or multilingualism.

III. Speech Variables

Whether one's objective is to relate aspects of speech to social features, to account for the internal structure of speech events, or to develop a theory of interpersonal interaction, it is necessary to classify and measure the interaction process itself. Since this paper is concerned with sociolinguistics rather than a general study of communication, the focus will be on verbal interaction. The interactional output can be described in terms of the following classes: channel (telephone, writing, tape recording, voice, voice and gesture, etc.); paralinguistic and production features (frequency of speaking, rate, silences, pitch, voice quality, etc.), linguistic form, and speech acts, topics, and messages. This list, of course, derives from that given by Hymes (1962), and Jakobson (1960).

A. Channel

The circumstances of communication may cut out access to channels, and thereby systematically alter certain features of the communicative system. To the extent that these changes are externally imposed, we can expect to find universal features. For example, at present the telephone is everywhere an instrument that eliminates bodily and facial gestures, referential pointing, and reduces vocal cues somewhat. The absence of visual monitoring throws onto the vocal channel the function of attention-confirmation (mmhmmm) by the listener. One assumes some equivalent exists in telephone communication everywhere. The absence of referents visible to both means that deictic terms like "here," "there," "right down here" and "this one," to the extent they mark contrasts solely within the speaker's surround, are impermissible.

Learning to take the point of view of the hearer comes relatively late, to children. Flavell (1966) has shown that young pre-schoolers, even after the time they think the listener is inside the telephone, have difficulties adapting messages to, for instance, a blindfolded listener. It is not clear how much of this difficulty has to do with the general development of "decentration" as Piaget called it (1950), and how much reflects training.

Telephone talk is, in addition, a social situation for which cultural rules develop, as Schegeloff has shown. The fact that telephone calls are intrusive, for instance, might in some cultures result in provision of a regular form for the escape of the summoned.

Recent work on gaze direction during talk suggests how these universal and culturally-specific features might be related. Kendon (1967) found that three factors enter into the pattern of gaze of a speaker towards or away from a listener. One factor is emotion; when the speaker manifests agreement, or shares negative feelings like sadness, horror, and disgust, he looks away from the listener. During the coding of complex utterances he looks away, as if he needs to avoid distraction; during hesitation pauses and phrase-beginnings he looks away. When he reaches the end of an utterance he looks at the next speaker. If he fails to do this, there is a silence, as though this is the signal of an "adequate complete utterance." His gaze, in a multi-party conversation, can determine allocation of speaking rights. In societies which minimize mutual gaze, the listener may perhaps gaze at the end of an utterance; if not, some other signal must be identified with the function of signalling termination if rapid conversation occurs. The particular value of Kendon's work is that by relating gaze to linguistic units and role exchange he suggests a more integrated approach that a study of gaze or gesture (e.g. Ekman, 1964) without these features would yield. Tervoort (1961) examines, in a descriptive study, the integration across channels in deaf communication; he notes that imitative gesture, symbolic or conventionalized gesture, speech, and finger-spelling all are used, frequently concurrently. Finger-spelling, however, being relatively slow, serves a disambiguating function, and is an adjunct.

The differences between oral and written channels have seldom been systematically studied. In some societies written discourse requires a radically different code; in diglossia, whether bilingual or of the subcode variety, it is considered humorous if not vulgar to write the oral code (Rubin, in press). But even for speakers of standard English, there are some small structural differences between "formal style" and writing, for most speakers. One example is the placement of participial phrases.

Vigotsky has pointed to more profound differences, in a brilliant passage (1962) discussing why children have trouble learning to write:

> Written speech is a separate linguistic function, differing from oral speech in both structure and mode of functioning. Even its minimal development requires a high level of abstraction. It is speech in thought and image only, lacking the musical, expressive, intonational qualities of oral speech. . . . Writing is also speech without an interlocutor, addressed to an absent or an imaginary person or to no one in particular. . . . The motives for writing are more abstract, more intellectualized, further removed from immediate needs. . . . Written speech follows inner speech and presupposes its existence. . . . But . . . one might even say that the

syntax of inner speech is the exact opposite of the syntax of written speech, with oral speech standing in the middle. Inner speech is condensed, abbreviated speech. Written speech is deployed to its fullest extent, more complete than oral speech. Inner speech is almost entirely predicative because the situation, the subject of thought, is always known to the thinker. Written speech, on the contrary, must explain the situation fully in order to be intelligible. The change from maximally compact inner speech to maximally detailed written speech requires what might be called deliberate semantics--deliberate structuring of the web of meaning (98-100).

That these differences lie not in the channel per se but in the social accompaniments of writing is suggested by the studies on writing to oneself (e.g. memo notes, class notes) of Edith Kaplan (Werner and Kaplan, 1964, Ch. 19). Experimenters frequently select a channel for convenience, but fail to note that channel selection may radically alter many features of the communication, including the formal features ordinarily used, functions served, rules of discourse, and topics and messages conveyed. The study of these variations themselves will be necessary for sociolinguistics.

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B. Paralinguistic features

Pittenger, Hockett, and Danehy (1960) have made a relatively exhaustive survey of the speech features in a five minute sample of English speech. Recordings of this segment are available, so that coders can be trained on the analysis of many paralinguistic features. Those described in the book include the physical continuum features like pitch, volume, and rate, and the breadth of range of each of these features in a clause; voice qualities like hoarseness, rasp, unctuousness (open throat); and vocal segments like sighing, yawning, and coughing. Markel (1965) has shown that it is possible, with proper training procedures, to get inter-judge agreement on the first three qualities. Even "trained" judges, unless they have been jointly trained, are likely to disagree on these judgments since usage of the terms varies. Anyone studying paralinguistic features could use the materials in this book as a basis for establishing reliability in his raters.

The work of Matarazzo and his colleagues (Matarazzo, Wiens and Saslow, 1965), Goldman-Eisler (1964), and Mahl (1964) provides examples, among many, of the study of speech onset, hesitation, and silence, between participants in interaction. These findings have shown some important connections between the linguistic structure of speech and production features. In natural situations such parameters could prove important. For instance, Bell and Eldred (   )

found that the average interaction time in contact between nurses and mental hospital patients was less than one minute.

It is necessary, in studying both pauses and features of pitch, and volume, to distinguish linguistic from non-linguistic variants. Listeners make quite different judgments of the same physical pause unit, depending on its linguistic function. If hesitations are relatively short, they will be heard as pauses if they occur within linguistic units such as phrases. Conversely, listeners can hear a pause that is physically not there, for structural reasons. Thus a physical measure that does not take into account the linguistic unit corresponding to the silence, is likely to provide muddy results.

The same phenomenon has been found in English stress and pitch in an ingenious study by Lieberman (1965). The Trager-Smith system of linguistic notation used in Pittenger, Hockett, and Danehy (1960) is usually found hard to use by anyone who assesses reliability of judges. Now we know why. Lieberman found that judges were in fact only able to judge two kinds of terminal juncture, falling and non-falling. They could judge peak pitch and to some degree direction of pitch change, but could not judge pitch levels. They could hear only two levels of stress, namely stress and non-stress, though Lieberman suggests that vowel centralization (see above, section IIC 2 b for some examples)may provide cues to a third level. As one who never could distinguish the

Trager-Smith middle two levels, I found this result enlightening. The implication is that prosodic codes should include peak pitch, two juncture levels, and two stress levels. The rest is simply redundant with linguistic structure anyway, and is not present in the physical signal, but put there by the hearer. Since prosodic cues are quite important in distinguishing deference, for instance, and such styles as baby talk, any precision in such research requires establishment of reliable coding. Lieberman refers to several "tonetic" notations which seem closer to what can be perceived in the physical signal.

C. Linguistic features

In this section we will define succinctly some of the terminology to be used in the following sections of the chapter. Standard sources like Gleason (1965) and Koutsoudas (1966) can elaborate with examples and problem-sets.

The linguistic system can be seen as an abstract system of categories and rules linking two systems extraneous to it, the semantic, social, and function system at one end and the physical communication signal at the other. Since these systems are not structured the same way, they do not bear a one-to-one relation; the linguistic categories and rules provide systematic conversion between these two levels.

At the semantic end, there is a systematic component which organizes selected features of the semantic world into a "sememic" level (Lamb, 1964, 1966). The imposition of perceptual organization on semantic input is evident in the existence of contrast sets within the language, such as tree vs. bush, ram vs. ewe, powder snow vs. corn snow, conative vs. cognitive (Hammel, 1964; Frake, 1962). Sememic contrasts can be realized either through lexical alternatives or through grammatical features. For example, the relation subject-object in English may be signalled by order, in Latin by alternative inflectional suffixes. Systems thus can differ either in the semantic contrasts that are coded in contrast sets in the linguistic system, or in the particular linguistic features by which they realize the contrasts.

By lexicon we mean the categories available in the vocabulary to realize sememic contrasts. Sometimes lexical items are realized by phrases, like "The United States of America," or "function word" or "White House"; these may have one-word translations in other languages, and they function in the syntax just as single words do. Lexical units have semantic features and syntactic features. Collocation refers to lexical co-occurrence probabilities.

Syntax refers to the organization of these units. It includes a variety of types of rules: selection rules, subcategorization rules, and branching rules, all having as component units abstract forms. Transformational rules in the syntax operate on the sequences of forms and by reordering and combining them with inversions, additions, deletions, and substitutions, produce such complex structures as included sentences, nominalizations, and passives, as well as the final formal sequence of simpler sentences (Chomsky,1965).

The lexicon and certain formatives in the syntax are realized by morphemes. These are the smallest units in the language which, when phonetically realized, seem to be meaningful--e.g. roots, affixes, function words. They combine, by morphotactic rules, into words and phrases. They are composed of morphophonemes, but these may change depending on the context. Thus the morpheme A in the context "plural" is realized phonemically as "wive" but in other contexts as "wife." These are called allomorphs of the morpheme, or alternative realizations. Phonemes are constructs, the minimal distinctive segments which identify morphemes, and which are realized in the phonetic system as ranges of physical signal. In different phonemic contexts, the allophones, or alternative realizations will vary. Phonotactic rules specify the possible sequences of phonemes in English, and they can help us predict that "kliksths" is pronounceable but "tlitsks" is harder; though "hang" occurs, "ngah" is unlikely. Since these terms are not used identically by everyone, this list is intended as a kind of glossary for usage in the chapter.

Many forms of analysis can arise from the use of underlying linguistic categories. For example, John and Berney (1967) in studying children's repetitions of stories, divided description from action. If one examines their categories, it appears that the underlying criteria can be defined by categories of the grammar, e.g. description=noun phrase (+ adj. or N). They found Sioux children used more action relatively, than Navaho children retelling the same stories.

D. Speech acts, topic, and message

"What are you talking about?" "We were just saying hello." "We were telling jokes." "I was introducing Joe." Subordinate to organized exchanges like parties and working together are classes we have called speech acts. In the above examples, their identity is suggested by the folk classification. Here the informants can label segments of interaction.

There also must be unlabelled interaction. "Hello. Where is the Post Office?" addressed to a passerby, or "My name is George Landers. What time is it?" to a stranger, violate, according to Labov, sequencing rules. If this is the case, the conjoined segments must have identifiable properties by which the rules can be characterized abstractly. In bilingual interaction the segments may entail language shift.

There is no reason to assume that speech acts are the same everywhere. Certain special forms of discourse, like poetry and speech-making, may have components known only to specialists. Whether and why there are labels used in the teaching of these performances is itself an interesting cultural study.

Speech acts in English include greetings, self-identification, invitations, rejections, apologies, and so on. The ones identified so far tend to be routines, but we can expect to find other more abstract units as research proceeds.

When conversations have an explicit message with informational content, they can be said to have a topic. "What are you talking about?" "Nothing" "Gossip." "Shop talk," "The weather" "The war," "We were having an automobile discussion about the psychological motives for drag-racing in the streets." In everyday discourse, the question of topic is most likely to occur in invitations or rejections, so that the answers are such as to exclude a new arrival or give him enough information to participate. Besides selecting personnel for participation, topics may be governed by a continuity rule. In a formal lecture in a university there is a constraint on continuity and relevance, just as there is in technical writing, where editing can enforce the constraint. Evidences of constraint are apologies for deviation: "That reminds me . . ." "Oh, by the way . . ." "To get back to the question . .." "To change the subject . . ." Cultural rules regarding speech events may include constraints as to the grounds for relevance.

Kjolseth (1967) has found in analysis of some group interaction that topical episodes are key factors in speakers' tactics.

> A performer's tactic may be to direct his episode as a probe into the preceding episode. In contrast, in another situation his tactic may be to extend and elaborate some antecedent episode. On still another occasion his tactic may be to close off and limit a previous episode . . . These tactical types are based on, or defined in terms of, two qualities abstracted from the performances: a) the episodic locus of relevances drawn from the existent conversation resource, and b) the purpose of the episode with respect to surrounding episodes."

Lennard (1966) has examined topical continuity in therapeut ic sessions, and found the amount of continuity to be related to satisfaction. The three examples given by Kjolseth would involve topical continuation, recycling, or change, respectively. These general features of speech events require that members be able to identify relevance, but not necessarily label topics.

There is yet a third form of evidence that topic may be a cultural unit. Bilinguals can frequently give reliable accounts of topical code-switching, and their behavior often corresponds in general to their accounts. (Ervin-Tripp, 1964).

We can thus argue that topic must be a basic variable in interaction, on the grounds that speakers can identify topical change as generating code-shift, that speakers can sometimes report what they are talking about, and that topical continuity, recycling, and change may be normative features of speech events, or at least relevant to values about good conversations.

The analysis of messages refers to two-term relationships, whereas topic is a single term allowing for simple taxonomies. Here we intend to refer only to the manifest or explicit message. Our reason for the distinction is that latent content categories typically refer to intent (e.g. Dollard and Auld, 1959, Katz 1966, Leary 1957, Marsden 1965). Our position here is that intent or function is part of the constellation of social features out of which interaction is generated. It can be realized in a variety of ways, of which verbal interaction is only one. We seek regular rules by which one can relate underlying categories with their formal realizations, or the formal features of interaction with their social meanings. Failure to discover such rules has led to considerable discouragement with the evident arbitrariness of content classifications in studies of natural discourse.

The manifest message, on the other hand, is the product of the social features of the situation as well as of intent, and is therefore inseparable from the interaction product. All the selections made in realization of the functions of communication can carry some kind of information, whether about the speaker, the situation, the hearer, or the topic. In detail, given alternations cannot do all at once, though they may be ambiguous as to which is intended. In this case, we intend the message only to refer to what is said or implied about the topic. There have been numerous summaries of ways of classifying messages (e.g. Pool, 1959). A recent innovation is logical analysis (Véron et al. 1965). The underlying structure of logical linkages between terms in utterances was analyzed, then semantic relations were described in terms of logical relations between pairs of units (e.g. equivalence, inference, conjunction, specification of conditions, sequential relations, explanation, opposition, causes . . .). A Markov semantic analysis revealed very large and consistent differences between subject groups, which were, in the study reported, clinical categories.

The same speaker information potentially can be realized through different means, for example, through explicit message content and through paralinguistic features. The conflict between these messages creates an interesting question of which is dominant. According to Mehrabian and Wiener (1967), who used controlled stimulus materials, regardless of the instructions to the listeners, the tone of voice is the dominant signal for judging affect. What is called the "double bind" must be a consequence of more than conflicting messages, for instance it could be a requirement of overt response to the overt message on one occasion and to the paralinguistic cue on another, with no signal as to which is required.

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E. Units

The definition of appropriate units for analysis is important in comparing results of different studies. Watson and Potter (1962) discussed a macro-unit, the episode, which is defined by the stability of component features: the role system of the participants, the major participants, the focus of attention, and the relationship towards the focus of attention. The unit thus may be less than an utterance in length or may include the contributions of many speakers. In Lennard's research, one might say that satisfaction is related to the length of episodes. Watson and Potter chose the term "focus of attention" in order to differentiate cases where the topic is a person's experience, an on-going activity, or an abstract referential category, as in a "discussion."

In thematic analyses, it is common to use either episodic (Katz 1966) or sentence units (Auld and White 1956). However, the sentence is not, strictly speaking, a unit in oral discourse. One can see texts in which long sequences of clauses linked by "and then . . ." occur. Are these separate sentences or one sentence? There have been four criteria separately used, with different results: message criteria, structural or linguistic units (e.g. any segment containing a verb, or naming phrases in isolation), pauses, and intonational contours (Dittman and Llewellyn 1967).

Generally words or even morphemes are poor units for counting length when any cross-language comparisons are to be made. Thus French texts bear a constantly longer ratio to their English translations simply because many syntactic constructions realized in English by noun-noun, sequences require longer phrases in French. In addition, some lexical units like "How do you do" and "United States" are as much single units functionally as "Hi" and "Spain." This problem arose in John and Berney's (1967) work with story retelling. They found that the phrase was a better unit, when defined as an independent utterance, since it was independent of structure. In their research Negro, Mexican, and Puerto Rican children in the United States told longer stories than Sioux and Navaho children, when allowed to choose the language in which to talk.

F. Recording

The decision to do a linguistic analysis of data normally cannot be made post factum. Equipment purchases, recording methods, and tape storage all must be seriously planned if severe disappointment is to be avoided. For more detail see Samarin (1967) and Slobin (1967).

1. Equipment

While many high-quality tape recorders are in common use in social science departments, in many cases the accessory equipment is of low grade. If tapes are played back through hi fidelity equipment, the difference in quality is apparent. First, make sure the recording machine has a wide enough spectrum for good voice recording at the speed needed. Tests can demonstrate this. If a battery machine is needed, several good ones such as the Nagra, and the fragile Uher, are available, with new products appearing monthly.

An additional investment in a good microphone and earphones is usually necessary. The type of microphone depends, of course, on the recording conditions. For groups, Lavalier (neck) microphones provide the most complete information, recording even sotto voce contributions. But in noisy settings or with children, highly directional microphones may be preferable. In groups, stereo recording can both provide a wider range of close recording, and provide binaural cues for identifying speakers, compared to conventional microphones.

2. Tape

The thickness and amount of tape necessary depends on whether transportation is a serious problem. Tape print-through can create blurred recordings due to a transfer of magnetic patterns from one layer of tape to another. It can be minimized by the use of thick tape--preferably 1.5 mil if storage is intended, and by use of one side of the tape only, without rewinding. Reducing the recording level will also decrease print-through.

At the time of purchase, leaders should be spliced to tapes lacking them. If both sides are to be used, a leader spliced at both ends permits labelling of the tape before it is used, and minimizes the chances of accidental erasures. Box labelling or rell labelling is untrustworthy. The tape labelling system is the heart of a log or index file.

3. Recording techniques

Background noise is the enemy which influences most features of recording methods. Metal cabinets and reflecting smooth walls can be masked with curtains, the tape machine placed far away from the microphone. The distance between the microphone and mouth optimally is about 12 to 18 inches, allowing reduction of recording level to cut out background sounds if there are any. If this close recording is not possible, a strongly directional microphone may help. The most important precaution is to take the time to learn to record, and to test the quality of recording under realistic conditions, with as much care as one would take in training a team of coders. Good recordings should allow discrimination between fine-grain contrasts like /f//th/, /ŋ / /n/, $[t^h]$ [ts] [ts] on test phrases.

4. Storage

Print-through and tape deterioration during storage can be very serious if tapes are to be archived or analyzed after several years. While mylar tapes last relatively well, temperatures should be constant around 60-70°, and humidity low, if necessary with silica gel. Tapes stored on edge, far from sources of magnetism, last best. Frequently language laboratories in large universities have controlled storage facilities.

IV. Linguistic diversity

A. The fundamentals of communication

The fundamental fact about language is its obvious diversity. Moving from country to country, region to region, class to class, caste to caste, we find changes in language. Linguistic diversity apparently is related to social interaction.

Linguistic similarity must be explained, for it is clear that separated sets of speakers will develop different languages. Two quite different bases for similarity can be examined--the fundamental requirement of mutual intelligibility among people who belong to the same social community, and the consequences of variability in overt behavior in terms of social values.

A test for mutual intelligibility might be the Two-Person Communication game. First used by Carroll several decades ago, it has recently been revived (Maclay 1962, Krauss and Weinheimer 1964, Brent and Katz 1967). A hearer out of sight of a speaker selects, constructs or in some way responds to instructions from a speaker regarding a set of materials. Feedback may or may not be allowed. The advantage of this method is that one can examine the relation between success in the objective task and various speech features, and that the social relation of speaker and hearer can be controlled. For our question about the degree of similarity required for intelligibility, we shall assume optimal social attitudes and simply concern ourselves with features of linguistic structure. No feedback is allowed, and we shall ask what the bare minimum of linguistic similarity might be that would allow successful transmission of messages about referents.

1. There must be shared categories of meaning, so that speakers will attend to the same features of the referent materials.

2. There must be shared lexicon identifying the significant referents, attributes, relationships, and actions, and shared central meanings for this lexicon. Languages which are related and have many cognates are instances.

3. The shared lexicon must be recognizable. Thus its morphophonemic realizations must be similar, and the phonological and phonetic systems must be sufficiently alike to allow recognition of the similar items. Precisely what these limitations entail is not clear. Wurm and Laycock (1961) have shown that both phonetic and phonemic differences can lead to asymmetrical intelligibility of cognates among related dialects. They found instances where A understands B, but not vice-versa. They suggest use of a phonetic hierarchy of rank to account for such cases. For instance,

they found that the speaker using a stop could understand a speaker using an homologous fricative, but not the reverse. This suggestion is important and needs further testing. I would have predicted the reverse, on the grounds that a speaker's repertoire in comprehension includes child variants, which tend to be of "higher rank" phonetically than their adult models.

A second point they make is that the phonological system relationships, i.e. those found in contrastive analysis, may allow predictions. We can suppose that one-to-one high frequency substitutions might be easy to recognize where the phonetic realization, but not the phonological system, is affected. Comprehension of foreign accents is easiest in such cases. O'Neill (in press) shows an asymmetrical many-to-one case.

Further, there must be some similarities in phonotactic rules so that the lexical forms can be related. In instances of children's renditions of adult words we often find that adults cannot comprehend because of the radical alteration in the word-formation. Thus [mana] and [ŋan] are unlikely to be recognized as "banana" and "gun," and [me] and [ni] in another child are even less likely to be recognized as "blanket" and "candy," though each arises from regular replacement rules (Ervin-Tripp, 1966). In each case, the initial consonant was nasal if a nasal occurred anyplace in the adult word, and it was homologous with the initial consonant of the model word. Other word length and syllable-forming canons differed for the two children.

4. There must be shared order rules for the basic grammatical relations. By basic relations (McNeill, 1966) we mean subject-verb, verb-object, and modifier-head. Unless these minimal structures can be identified, the communication of messages is not possible, though topics or labels could be listed.

There has been, to my knowledge, no research raising precisely the above structural questions and using the Two-Person Communication Game. Esper (1966) studied the transmission of linguistic forms through a series of speakers experimentally, employing referents and artificial languages but in a different procedure. He found surprisingly rapid morphological regularization, which suggests that this is the "natural" tendency historically, within socially isolated groups.

Stewart (1967) has commented on two natural instances of cross-language communication where precisely these factors might impair intelligibility. In talking of the history of creolization lying behind current Negro dialect features he cites two examples in which the dialect might be unintelligible to a standard English speaker on first encounter. "Ah 'own know wey 'ey lib," he argues, contains sufficient changes in phonetic realizations, word-formation rules, and so on, to seriously impair recognition of "I don't know where they live." "Dey ain't like dat" is likely to be misunderstood as "They aren't like that" rather than "They didn't like that." The dialect translation of the first would be "Dey not like dat" or "Dey don't be like dat" depending on a semantic contrast not realized in standard English, between momentary and chronic conditions. This second example indicates that the basic grammatical relations may be the same, but misunderstanding still remains possible. Of course, Stewart was not discussing the highly restricted referential situation of our experiment.

The fascinating permutations on this experimental procedure would permit testing many experimental analogues of natural language change and language contact. We have predicted that when speaker A addresses listener B, under optimal social conditions, the success of the initial communication depends on structural relations between languages a and b. If B has had earlier experience with other speakers of a, we might expect him to have learned to translate features of a into b to some extent. It must take some frequency of instances to recognize structural similarities. We already know that A will provide better instructions, even without any feedback, with time, (if he is old enough) (Krauss and Weinheimer, 1964). Where exchange is always unidirectional, B learns to understand language a to some degree, and becomes a "passive bilingual." Note that B is not just listening, but is required by the task to perform actions, so that he is not like a T.V. watcher.

If give-and-take can occur, it is conceivable that a third language, c, might develop, with shared properties drawn from a and b. Such a development would be like the growth of a pidgin between two monolinguals under the press of trade or other limited encounters (Reinecke, in Hymes, 1964). One test of the degree to which c is actually intermediate between the other two, or a composite of them, is to test whether when c is the code, A can communicate more successfully with B' than he first did with B. That is, we assume that if c is closer to b than was a, it should be a more efficient means of communication even to a neophyte listener.

The encounter of speakers from different language communities has had a variety of outcomes in natural conditions, including mutual bilingualism, the evolution of a pidgin, and one-way bilingualism. It might be possible to explore the social conditions yielding these varied results by controlled manipulation of conditions.

An important feature of this procedure is that it can allow separate assessment of comprehension and speech similarity. If system a is understood by or perhaps translatable into b by the listener, there is no implication that B necessarily can speak language a. It is quite a separate issue whether features of a enter into the speech of B; under some social conditions features could perhaps be transmitted without comprehension.

Several recent studies of inter-group "comprehension" make the issue of objective measurement of intelligibility important. Peisach (1965) studied replacement of omitted items (the Cloze procedure) in passages of children's speech. She found that middle class children do better than lower class children in replacing every nth word verbatim in the middle class samples of speech, and on the lower class speech do as well as the lower class children. When similarity of grammatical category alone was considered, she found Negro speech replaceable equally by all, but white speech easier for the middle class children (and for white children). The Cloze procedure requires actual emission of the appropriate response. It could be considered a form of comprehension test only if one believes in the "analysis-by-synthesis" theory of comprehension; it is not on its face a comprehension measure. Another way of stating the results is that middle class children can predict and imitate lower class and Negro speech but lower class and Negro children are unwilling (or unable) to produce middle class and white speech, by the fifth grade. Harms (1961) found the opposite among adults, who understood speakers of high social rank best, or of their own level, when using Cloze.

Labov (1967) has some striking evidence suggesting that Negro children, also in New York, can comprehend but not produce standard English. Children paid to imitate sentences gave back "I asked Alvin if he knows how to play basketball" as "I aks Alvin do he know how to play basketball." These translations are regarded by the boys as accurate imitations. Likewise "Nobody ever saw that game" would become "Nobody never saw that game." For the deep grammatical differences, not arising by deletion rules out of the standard grammar, the boys clearly understood but were not able to produce the standard forms.

Two groups can communicate extremely well, indeed perfectly, though they speak different languages. Multilingual conversations are an everyday occurrence in many social milieux; there may be interspersed lexical borrowings in both languages, but if there is a common semantic core, mutual communication can survive very different realization rules.

If it is the case that the social life of a community could be carried on without speech similarity, then we cannot explain language similarity solely on the demands of basic communication. A more profound account is needed.

B. Communicative frequency

A common explanation for the evidence of linguistic similarity and its distribution is the frequency of communication between speakers. The most obvious determinants of frequency are proximity, work, power, and liking. If one undertakes to write a rule predicting who will speak to whom, with a given intent, proximity always enters the rule.

Thus in housing projects, people at positions near high-traffic points are talked with more; in classrooms, neighbors become acquainted; in small groups, seating controls interchange frequency (Hare and Bales, 1963).

Some selection factors may make proximity secondary, except as a cost component, so we find people commuting hours to a place of work or flying six thousand miles to a conference. Power appears in small groups where resources or status assigned or assumed may increase frequency of interchange (Bales et al., 1951). Considerable research suggests how people select "similar" addressees for social interaction, which in turn increases their liking. Homans, in fact, pointed out that the interaction arising from sheer proximity could create "sentiments" (1950) and thereby increase liking. All of these features which measurably increase interaction in studies of face-to-face groups have cumulative effects visible sociologically.

These features of face-to-face interaction compounded over many individuals should be evident in the geographical distribution of linguistic features. One of the oldest forms of sociolinguistics is dialect geography. The distribution of particular speech features is mapped, the boundaries being isoglosses. Normally these are not identical for different speech features. Extensive studies have been made of such distributions in Europe and the United States--for instance of bag vs. sack, grea/s/y vs. grea/z/y. In general, linguistic features reveal the patterns of migration, intermarriage, transportation routes. If there are natural barriers or social barriers to marriage or friendship, isoglosses may appear. Thus McDavid noted (1951) that the rise of the large northern ghettoes in the past forty years has led to an increase in the linguistic distance of northern whites and Negroes. Individual lexical items may follow the salesman: "tonic" is used in the Boston marketing area for soft drinks, "chesterfield" for couch or sofa in the San Francisco wholesale region, at one time.

The political boundaries between communities are sharp, but may not seriously effect interaction frequency over time. This we can infer from the fact that isoglosses do not match political boundaries. Isoglosses often do not even correspond with each other; that is, individual features may not diffuse at the same time or in the same way. Changes, as one would expect on a frequency model, are gradual. Gumperz (1958), in a study of phonemic isoglosses, found that changes were gradual even within the isoglosses. The functional load or practical importance of the contrast, gradually decreased until it disappeared, and the phonetic distinctiveness also decreased.

The most extreme test of the argument that frequency of communication reduces speech diversity occurs in bilingual contacts. Gumperz (1967) located a border region between Indo-Aryan and Dravidian speaking sectors of India, in which speakers were bilingual, using Marathi and Kannada in different settings. These border dialects have become increasingly similar in centuries of bilingualism. They have the same semantic features, syntax, phonology, and differ only in the phonemic shape of morphemes, what we might call the vocabulary and function words. Each dialect was essentially a morpheme-by-morpheme translation of the other. However, other speakers of Kannada still identify this dialect as a form of Kannada because they recognize its morphemes--it just is a deviant form, as Jamaican Creole is a deviant form of English.

This example illustrates both convergence of speech with high interaction frequency, and the maintenance of contrast. The convergence occurred at those levels of language we have reason to believe are least conscious and least criterial for the identification of the language. Speakers tend to identify languages by the shape of the morphemes, by the vocabulary but even more by its function words and inflectional and derivational morphemes. The Kannada-Marathi example demonstrates that in spite of high contact frequency speakers may insist on maintaining linguistic diversity, and that they may in fact believe it to be greater than it is.

There are in fact many instances, to be discussed later, where frequency is high but speech distinctiveness is maintained. Castes in India interact with high frequency; Negro servants in the United States interact with employers;

lower class pupils interact with teachers; monolingual Spanish-speaking grandmothers interact with monolingual English-speaking grandsons. Yet diversity persists.

High frequency of communication is a necessary, but not a sufficient condition for increased linguistic similarity. High frequency of communication must result at a minimum in passive bilingualism of both parties, active bilingualism of one party, or a lingua franca. The only necessity is that each understand the speech of the other.

We do not yet know what the consequences of passive control of two systems must be. Active control typically leads to convergence at certain levels, starting with the semantic, optional syntactic features, in general what we have called "non-basic" grammar (Ervin, 1961, Ervin-Tripp, 1967). We have argued that there are cognitive reasons for such fusions, and that they tend to take place when social conditions such as contact with monolinguals, reading, and strong values about co-occurrence restrictions do not provide strong support for system separation. Presumably passive control of a second language has less impact.

Only one study has directly related the relative communication frequency of individual persons who all communicate. to speech similarity. Hammer and Polgar (1965) measured the observed centrality of individuals, and also the person-to-person frequency for every pair in a New York coffee shop with a regular clientele. They obtained speech samples and used the Cloze procedure. Central persons were most predictable, and each person most successfully predicted the omitted items from the persons with whom he interacted most. It is not quite clear what is measured in Cloze. All phonological features are missing. What is included are semantic factors that influence collocations, vocabulary, and perhaps some aspects of grammar. This study at first persuasively supports frequency as a critical variable in similarity, but it may not meet the critical limitations. The study was done in a social setting, interaction was social, and the members were parts of friendship networks. That is, some third variables may have determined both interaction frequency and similarity on Cloze.

The hidden variable seems to be cohesiveness.

C. Cohesiveness and linguistic diversity.

It seems to be the case that people talk like those with whom they have the closest social ties. We do not know precisely why this is the case; it may be that the features of social relationship which bring about this result are not the same for all types of speech similarity. In social networks and groups, there is a high frequency of interaction. Because of the high attraction of others in the group or network, they not only serve as models but can act as reinforcing agents in their response to speech, affecting attitudes toward features in the community repertoire. In addition, there might be secondary reinforcement in sounding like a valued person.

All levels of speech appear to be affected. With respect to the phonetic realization of phonemes, age may constrain changes in the system; even under optimal conditions, many persons over twelve seem to have difficulty changing their phonetic realization rules except under careful monitoring.

Labov (1964) from studies has concentrated on measurement of articulation ranges, has argued that the everyday vernacular is stabilized by puberty on the basis of the peer model. Cultures (if such exist) where peer ties are weaker would provide a valuable comparison.

The functions of communication in cohesive networks necessarily include a high frequency of requests for social reinforcement, and of expressive speech. The social group may or may not be concerned with information and opinion exchange for its own sake. Davis (1961) in a study of the maintenance or dissolution of "great books" discussion groups, found that if there were many members of a social network in such a group its durability was enhanced for college-educated members and decreased for non-college-educated. He suggested that for the latter there might be a conflict between interaction practices in the network and the constraints of the discussion group. Bossard (1945) commented on large differences between families in the extent of information-exchange in dinner table conversation.

Bernstein (1964) has suggested that inter-family differences in discourse are likely to be related to social class. As members of closed social networks, families in English working-class communities may utilize more "restricted speech" which is focussed on social functions and includes considerable tacit understanding. The formal reflections in linguistic structure of differences in language function should show up in discussion within friendship networks, though this has not been the usual measurement method. Bernstein would expect more elaborate syntax in the form of imbeddings, more varied subordinators and adjectives, as a necessity in informational discourse. Since Lawton (1964) did find such differences in group discussions but not in interviews employing description and interpretation of pictures, one must attribute the differences to features in the group discussion situation itself, i.e. functions of discourse for the group. Cowan (1967) found working class children less successful in the Two-Person Communication game when paired with other working-class children, but able to learn successful techniques from middle class partners.

Hess and Shipman (1965) who observed actual mother-child interaction in Negro pre-school families, found considerable social class variation and between-family variation in the extent to which mothers used the situation to elicit labelling and informational communication from the children.

The measures correlated two years later with oral comprehension Schatzmann and Strauss (1955) found social class differences in oral narratives that may be related to Bernstein's distinction.

There has been too little study of natural interaction within the social groups involved to extricate what the important differences are--whether they lie in the amount of interaction of children with adults vs. peers and siblings, whether there are differences in encounters with strangers and training of children in competence with outsiders, whether there are differences in emphasis in intra-group speech functions.

Because evidence about the verbal skills of lower-class Negroes came from formal testing situations and classrooms, there have been widespread misconceptions about "verbal deprivation" in American society, with expensive educational consequences. Recent investigators such as Labov and Cohen (1967) in Harlem, and Eddington and Claudia Mitchell in San Francisco and Oakland, have recorded natural interaction. All have found that Negro lower class speakers are highly verbal, in terms of speech frequency. Both adolescents and children engage with great skill in verbal games and in social, affective, linguistic interaction. "Controlled situations" may in fact obscure the very skills which for a particular group have been most developed.

General "verbal deprivation" could conceiveably exist. It most probably would be found in unusual social isolation, or in cases of social marginality, particularly where a language has been lost but there has not been full access to a range of functions in a second language. For further discussion, see Cazden (1966, 1967).

Topics of discourse are likely to be different in cohesive networks as a result of differing values and interests. The result is considerable impact on the semantic structure and lexicon.

One way of studying differences in messages arising from communication is to examine content shifts, under acculturation, where there may be radical changes in social allegiances. A study of this phenomenon in Japanese women married to Americans showed that there was considerable difference between women who gave messages typical of their age-mates in Tokyo and those who were more like American women, even when speaking Japanese (Ervin-Tripp, 1967). Word-associations, sentence-completions, TATs, story-completions, and semantic differentials were all used, in both languages. In general, the women who remained more Japanese in response content would rather be Japanese than American, preserve more Japanese customs, and keep up strong ties to Japan. The chief characteristics of the women who shifted to American responses are that they identify with American women, have close American friends, read American magazines, and met somewhat less opposition to their marriage from Japanese friends and family. The last point implies that they may, in Japan, have been less conservative. Though both sets of women would seem, on the surface, to have a cohesive tie to an American partner, the interviews revealed striking differences. Marriages in Japan involve far more social separation of husband and wife than here; for example, there is little joint socializing with non-kin. Many of the Japanese women in this country do not regard their husbands as confidants in trouble, and may indeed see them seldom. When either the husband or an American friend was regarded as a close confidant, the messages were more American. It is, in fact, not easy to give "typically American" responses on many of these tests, so their ability to do so represents a considerable degree of subtle learning.

Semantic innovation is one of the striking features of cohesive groups. There may be new activities requiring new names; there may be finer discriminations required along continua; there may be new conceptual categories. These are realized by lexical innovations which spread within the network. Examples are "she's a camp in high drag" in the homosexual network, referring to a male homosexual in women's clothing (Cory, 1952); pickpocket jargon for pockets: prat, breech, insider, tail pit, fob (Conwell , 1937); "cooling the mark out" by the confidence man (Goffman, 1952)trivial, motivated; reflexive. The last terms are used among transformationalists and ethnomethodologists, respectively with special meanings. Many examples can be found in Mauer ( ).

Some glimpse of the workings of this process can be seen in the Two-Person Communication Game.

Krauss and Weinheimer (1964) found that reference phrases became abbreviated with practice; given the limitation on necessary referential distinctions, abbreviated coding is efficient. The result is not merely a change in the external shape of the form but a semantic shift since the simplest term comes to have the specific meaning of the highly qualified phrase. The authors mention analogies like "hypo" among photographers and "comps" among graduate students.

Brent and Katz (1967) made comparisons of the types of coding of drawings by middle class whites and by Negro job corps teen-agers. Unfortunately they used geometric shapes, which gives a distinct advantage to subjects who are formally educated. They found the Negro subjects were relatively successful though they used non-technical names like "sharp pointed piece," "a square wiggling" and "the funny-looking piece." It would be an advantage to use materials equally strange or equally familiar to both groups, and to control network features of the speaker and listener. We have strong evidence that members of the same social group prefer non-technical communication. Where materials are neutral (e.g. nonsense forms) non-technical, highly metaphorical communication is most efficient both in terms of brevity and success, in a non-feedback condition.

Even though the semantic distinctions made are not new, group jargon, or new morphophonemic realizations for lexical categories, are common in cohesive groups. Occasionally such terminology arises to allow secrecy before outsiders, (though Conwell (1937) comments that secrecy is better served by semantic shift employing conventional morphemes). New morphemes are the most apparent mark of an in-group, whether or not they realize novel semantic distinctions. In fact, the best test for the symbolic value of the marker is whether it has referential meaning, and if so, whether it is translatable. Sutherland points out that the pickpocket's terminology is not used before outsiders, but is used to test the trustworthiness of a member of the network and to find how much he knows. In simple terms, the use of such terms can symbolize membership if the group is large and boundary maintenance is important; if the group is small, like a family, and its members known, the terms are used to allude to solidarity. Dollard (1945) cites examples of family words; many baby words survive, or nicknames, with such social meanings.

Where the incidence of social or regional dialect difference coincides with density of friendship network, the structural dialect features, including syntax and phonology, may come to be markers of cohesiveness. Blom and Gumperz (in press) found that the local dialect of Hemnisberget, Norway, had this significance to its residents.

Labov (1963) found that the rate of dialect change was different in Martha's Vineyard among young men, depending upon their social loyalties. There was a change in progress, very markedly differentiating young men from their grandparents. The men who went along in this direction were those who had the strongest local ties and did not want to move off-island. It is not clear whether interaction frequencies were also affected by the different values. The effect showed up in articulation.

Strong social ties affect all aspects of linguistic systems; our evidence suggests that the most quickly affected are the semantic system and lexicon--in short, the vocabulary. The structural morphemes evidently are not as sensitive to the forces of cohesion as are other morphemes.

D. Identity marking

Every society is differentiated by age and sex; in addition rank, occupational identities, and other categories will be found. Since the rights and duties of its members are a function of these identities, it is of great social importance to establish high visibility for them. Sometimes this has been done by legislation controlling permissible clothing, house type, and so on. Everywhere it seems to be the case that information about social identity is contained in speech variables. In urban societies the social function of such marking is greater, since it may be the only information available; on the other hand, the social sanctions for violation may be reduced. McCormack (1960) has noted the spread of upper-caste dialect features in urban lower caste speakers in India.

In some cases, there may be more frequent communication within rather than between categories. Clearly this is not always the case; within the western family, communication occurs with high frequency across both sex and age categories. Therefore, something other than frequency of communication or group cohesion must account for the preservation of speech diversity which marks social identity.

It is not precisely clear what features of speech mark _sex_ in the United States. In some languages (Haas, in Hymes, 1964; Martin, in Hymes, 1964) lexicon, function words, and phbnological rules are different for males and females. The study of the training by women of boys in such societies would be enlightening. There are clearly topical differences arising from occupational and family status, and therefore possibly semantic differences and differences in lexical repertoire. Masculinity-femininity tests have leaned heavily on differences in lexicon, particularly in the meanings realized, or in collocations. Sociolinguistic rules are probably not the same; e.g. speech etiquette concerning taboo words. Men and women do not use terms of address in quite the same way, and young women, at least, use more deferential request forms than young men. In fact, it is commonly the case in many languages that women employ more deferential speech, but one can expect that such differences should be related to other indicators of relative rank. For example, injjury deliberations (Strodtbeck, James, and Hawkins 1957) women are like men several steps lower in social class, in terms of their speech frequency and evaluation by fellow jurors.

Age differences in speech arise both through language change and age-grading. Though grandparent and grandchild may communicate, they are unlikely to have the same system. Labov (1963, 1966) relates several such changes to current distributions. For instance, he points out the spread of "r" in New York City. In the top social class, in casual speech, "r" was used by only forty-three percent of the respondents over forty, but by twice as many of the younger respondents. Changes like ice box-refrigerator (for the latter object), and victrola-phonograph-record player-stereo are apparent to all of us.

In addition, certain lexicon or structures may be considered inappropriate at a particular age. Newman (Hymes, 1964) remarks that slang is for the young Zunis. Children over a certain age are expected to stop using nursery terms like bunny, piggy, potty, horsie, except in addressing infants. Stewart (1964) has claimed to find a "basilect" which is learned among Washington D.C. Negroes from their peers in early childhood, and begins to disappear under negative sanctions, around 7 or 8. It contains several differences from adolescent speech. For instance, there is a semantic category in the verb not present in standard English: a completive, so that "I see it," "I seen it" (perfect) and "I been seen it" (some time ago) are contrasted. On the other hand, there is neutralization of past vs. present, in affirmation. In the present "I see it" vs. "I don't see it." In the past "I see it" vs. "I ain't see it."

Many statuses entail the learning of specialized languages or superposed varieties. The Brahmin, for example, is likely to have studied English and to have many more borrowings in his speech than the non-Brahmin. Brahmins can sometimes be identified by such borrowed forms or by literary vocabulary (McCormack). In addition, the functions and topics imposed by occupations can alter the speech of parents in the home, and in "anticipatory socialization" the children from different occupational milieux may be affected.

One way to differentiate similarity arising from cohesion from difference arising from identity marking is the presence of negative sanctions. Ramanujan points out (in press) that Brahmin parents specifically reject non-Brahmin items or use them with pejorative connotations. The Brahmins show in several respects that they value the preservation of markers of their identity. They consciously borrow more foreign forms and preserve their phonological deviance so that their phonological repertoire is very large. They have maintained more morphological irregularities (like our strong verbs) in their development of various inflectional paradigms, even though the evidence suggests that the earlier (now written) language was more regular. The evidence from the Esper experiment and the evolution of the non-Brahmin dialects is that regularization is the more normal destiny unless some factor interferes. In cases of phonological difference from the non-Brahmin dialects, in the realization of cognates, they have, in morphemes where the realizations fall together in the two dialects and would thus be indistinguishable, innovated a distinction. The semantic space is far more differentiated; so is the lexicon. The learning of a language full of irregularities is obviously more difficult; every child spontaneously regularizes. Like the Mandarin learning Chinese characters, the Brahmin puts additional effort into the maintenance of an elite dialect because the reward is its distinctive marking of his identity.

One might assume that lower castes would adopt prestige speech, and there is, as cited earlier, some evidence of such tendencies in urban milieux. One way of preventing such spread is the use of a non-Brahmin style when addressing non-Brahmins, which of course reduces frequency of exposure. In addition there are sanctions against such emulation.

American Negro speech may provide an example of identity marking though the evidence is ambiguous. Stewart has argued (1967) that Negro speech is based on creoles used in the early slave period, and that this history accounts for some of the basic semantic and syntactical differences Labov (1967) has recently cited, which appear in Negro speech all over the country. Labov has suggested that Negro speech and working class casual speech features have a connotation of solidarity which prevents any impact of standard English heard in school on casual style.

Certainly the clearest evidence of the identity-marking function of language is language maintenance during contact. Fishman (1967) has extensively discussed various features of language maintenance programs. Although the values of the dominant groups in the United States have strongly favored language shift by immigrants, to the point of legislating against vernacular education, some groups continued to resist the loss of their language. Those who succeeded best, according to Kloss (in Fishman, 1967) did so either by total isolation (like the Canadian Dukhobors), or by living in sufficiently dense concentrations to allow a high frequency of in-group communication and the use of their language for the widest range of social functions. In particular, many maintained their own educational facilities, e.g. Chinese, Japanese, Russians, promoting in-group cohesion among the children. A critical turning point lies in the speech practices of teenagers. Where they are forced to mix with outsiders in large urban schools or consolidated rural school districts the group language tends to disappear.

In parts of the world where there is a stabilized condition of great language diversity, as in Africa and Asia, it is quite normal to retain as a home language the group vernacular, but to be bilingual as necessary for wider communication. Probably the degree of language distance in these cases is relatively small, as Gumperz has pointed out (1967). In these instances the shape of morphemes is an important identity marker; shifting between co-occurrent sets of morphemes by such bilinguals is merely a more extreme instance of the small group vocabulary of the family, stabilized through time by endogamy and by the high value placed on group identity markers.

An extreme case in the opposite direction occurs in initial invention of pidgins. Here values of identity may be unimportant, and the practical need to communicate dominates. In fact, pidgins tend to develop when the norms which sustain co-occurrence rules are missing. Thus they appear in the transitory encounters of traders away from home, in the fortuitous combination of diverse speakers in the setting of work. In this respect African urbanization and slavery shared a feature, and we may guess that earlier circumstances of urbanization in Europe also gave rise to pidgins. Pidgins are characterized structurally by simplification and regularization, and by use of material from more than one language. At first, they are spoken with the phonetic features of the respective mother tongues. Of course, with time the pidgin can come to symbolize the subordinate-employer relation.

When a pidgin becomes the mother-tongue of its speakers, (and thereby technically a creole) it may acquire all the values of group identity of other vernaculars. Meredith (1964) quotes a speaker of Hawaiian Pidgin (a creole language) who was subjected to a University requirement of mastery of standard English: "Why you try change me? I no want to speak like damn haole!" Meredith reports "hostility, disinterest, and resistance to change" in the remedial class.

E. Attitudes towards speech diversity

In studying phonological diversity in New York City speech, Labov (1966) identified three different categories of social phenomena arising from diversity. These he called _indicators_, _markers_, and _stereotypes_.

Indicators are features which are noted only by the trained observer. For example, few people are aware that "cot" and "caught" are distinguished in some areas and not in others. Indicators are features which are functions of social indices like class or region but neither vary with style in a given speaker nor enter into beliefs about language.

Markers, in Labov's system, are speech features which vary according to the style of the speaker, or can be used in role switching. In the New York City system, he found that "r," "oh," and "eh" were very powerful markers, in that they changed radically according to the self-monitoring of the speaker. On Figure 5, the use of less [t] and more [th] with increased self-monitoring is shown by the slopes. A speaker who in rapid excited speech might say "It wasn't a good day but a bid one" or 'Ian saw tree cahs' might in reading say "bad,"'Ann', 'three,' and 'cars.'

Stereotypes, like their social counterparts, may or may not conform to social reality, and tend to be categorical. Thus, although high-ranked persons in New York actually use "r" in casual speech, and even in careful speech, considerably less than half the time, they are perceived as using it all the time, because of the contrast when an "r" is heard, with the normal practice of the listener's friends.

That some sort of expectations about speech are part of early language learning and permit identification of deviations from the very beginnings of speech, is indicated by the following observations of a two and a half year old boyl A month following the departure of a Negro housekeeper, he made a series of comments about her speech, usually in the frame "B. says_____." These included [kafi] (for coffee) [bəbəːz] (for bubbles), "baf" for "bath," ['windU] (for window), "Katcha" for "Katya," and "booboo" for his term "caca." These observations occurred through memory, comparison of what he now heard with his recall of her speech, which was quite accurate, and in most cases his attention was focussed on morphophonemic realizations of lexicon. In contrast, he never made comments about the speech of a Mexican housekeeper, whose deviant forms were always phonemically regular. For this reason, they may have been no more obvious to a child than idiolectal variations of individual speakers.

Hypercorrection involves the spread of a speech feature from a higher prestige group to another, with overgeneralization of the feature based on a categorical stereotype. In Figure 6, the upper middle class used "r" considerably less in self-conscious speech than did the lower middle class, who believed it to be characteristic of the best speech. An analogous example arises from the contrast between standard English "He and I came" and non-standard "Him and me came." Hypercorrect versions can be found which yield "She wrote to him and I" or "She wrote to he and I." Lexical examples are given by Ian Ross (1956) and even by Emily Post (1922); usually these are instances of the extension of formal, literary, or commercial vocabulary into casual speech. Labov has shown (1966) that hypercorrection is greatest among speakers who score high on a Linguistic Insecurity Index, derived from comparison of what they report they say and what they select as correct in pairs which in fact are not markers.

Blau (1956) has observed a very similar phenomenon among upwardly mobile persons in quite different measures of insecurity: these people report more nervousness, are more likely to discriminate against Negro neighbors, than any other types, and in these respects the members of high and low social classes are more alike than the intermediate people, provided they are mobile.

Labov (1966) has suggested that there may be "unconscious" stereotypes which account for borrowings which are not from prestige groups. He suggests that the masculinity connotation of working-class casual speech might be such an instance. His measure of subjective reaction to speech samples required subjects to rank the speaker occupationally, so it clearly asked for social class indicators, rather than features implying some other social meaning.

The richest variety of work along this line is that of Lambert (1963) and his collaborators, who have had the same speaker use "guises" to produce samples. These then are rated for a great range of features like personality, intelligence, and physical traits. French-Canadians, he found, rated a "french-guise" as less intelligent and less a leader than the English-Canadian guise. In a study in Israel (Lambert et al., 1965) on the other hand, it was found that Arabic-speaking and Hebrew-speaking subjects had mutually hostile stereotypes when judging the guises. Tucker and Lambert (in press) found that evaluation by northern white and southern Negro college students differed in that Mississippi Negro college speech was least favored by the whites, southern educated white speech least favored by the Negroes--top valued forms were the same for both groups.

Harms (1961) recorded speech from different social classes, and found that 10-15 second samples could be differentiated by listeners. Regardless of their own class, they rated high-ranked speakers as more credible. This method, like that of Lambert's, does not allow isolation of the critical linguistic features. Lambert, on the other hand, has been able to identify a far wider range of social meanings in the speech variations than did the single scales of Labov and of Harms.

Triandis, Loh, and Levin (1966) tried to balance various sources of judgment by counterbalancing race, messages (on discrimination legislation), and standard vs. non-standard grammar. Slides were shown while a tape was played. College students who as "liberals" were uninfluenced by race, were still much influenced by grammar, even more than by the message, in their judgments of the man's character, ideas, value, and social acceptability. Three-fourths of the variance on admiration and evaluation is carried by the linguistic contrast. A new test for liberals might be this: "Would you want your daughter to marry a man with non-standard grammar?"

F. Rules for diversity

William Labov has begun to use his large collection of material on speech of different New York City groups to discover rules accounting both for stylistic and inter-group diversity quantitatively. He has been able to use quantitative functions because he has been measuring articulation ranges and frequencies of occurrence, as speech variables, as well as using quantitative measures of social variables. Thus the rules he can find are not categorical in structure like those in Section II.

Figure 5 shows that a phonetic feature is a linear function both of social class and of style. Because of the apparently regular change with style, Labov argues that there is a single dimension he calls self-monitoring underlying the style differences. Obviously, the relationship can be expressed by a linear equation in which the phonetic variable = a (class) + b (style) + c.

In the case of hypercorrection, of the kind shown in Figure 6, the measure of linguistic insecurity can be used as a function of style, increasing its slope. For such phonetic variables, the function - a (class) + b (style) (index of Linguistic Insecurity) + c. Some adjustments are made for age as well.

These rules are important innovations. They treat linguistic phenomena as continuous variables. Whether the use of continuous measures is possible except at the phonetic and semantic edge of linguistics is not clear; frequencies certainly are quantifiable for discrete categories too. The rules, like those in Section II, introduce social features as integral components. Normally social features are mentioned in linguistic descriptions as a last resort, in a few items in the lexicon, pronominal system, style variations like those in Japanese where morphological rules must consider addressee. Finally, they include in a single formal description the difference between speakers and the differences within speakers. The fact that this is possible is impressive evidence of the existence of an over-all sociolinguistic system larger than the cognitive structure of members individually. As Labov has pointed out, a single member sees the system only along the coordinates of his own position in it; he only witnesses the full style variation of his own social peers. In fact, the possibility of writing rules which transcend class suggests a new criterion for a speech community.

V. Switching

If a given speaker is observed during the daily round, all the features of his speech may show some systematic changes. The total repertoire of some speakers is far greater than others. Some are bilinguals, some are community leaders with a wide range of styles reflecting their varying relationships and activities. In this section we shall bring together evidence on some of the major classes of variables affecting variation within individual speakers.

A. Personnel

In any act of communication, there is a "sender" and one or more "receivers" (Hymes, 1962), who together may be called interlocutors. In addition, there may be present an audience which is not the primary addressee of the message. The role of sender, or speaker, is rarely distributed in equal time to all participants. There appear to be four factors which affect the amount of talking of each participant. One factor is the situation. In informal small-group conversation the roles of sender and receiver may alternate. In a sermon the sender role is available to only one participant' in choral responses in a ritual, or in a question period following a lecture, the role of sender is allocated at specific times. The allocation of the role of sender is specified by sequencing rules for each type of speech event, and a sender may select his successor by a question or a gaze. A second, related, determinant of the amount of talking is the role the participant has in the group and his social and physical centrality. He may be a therapy patient, chairman, teacher, or switchboard operator, so that his formal status requires communication with great frequency; he may informally select such a role, as in the case of a raconteur or expert on the topic at hand. Third is a personal constant carried from group to group. The net effect of the second and third factors is that the sending frequency of participants in a group is almost always unequal, and has been shown to have regular mathematical properties in discussion groups (Stephan and Mishler 1952; Bales and Borgatta 1955) of ad hoc ensembles. Because relative frequency of speaking is steeply graded, not evenly distributed, in a large group the least frequent speaker may get almost no chances to speak. Knutson (1960) was able to produce radical alterations in participation rates by forming homogeneous groups on the basis of participation frequency. He found that talkative persons were generally regarded as better contributors, so there was great surprise when the homogeneously quiet group, by objective outside ratings, produced better work.

The receiver role is also unequally distributed even in face-to-face groups, being allocated in work talk to the most central, the most powerful, those with highest status, the most frequent speakers, and in highly valued groups to the most deviant. In social conversation proximity may be important. (Hare 1962:289, Schachter, 1951).

In addition to their roles within the interaction situation, the personnel bring with them other statuses. These are according to Goodenough (1965) "rights, duties, privileges, powers, liabilities, and immunities." We have mentioned that one of the functions of identity marking in speech is precisely to make clear what is required in the relationship. In any particular interaction, of course, not all the statuses of all participants are relevant. Obviously the specific relations tying participants are most salient, e.g. a husband and his wife, an employer and his employee.

In addition to determining the forms that interaction might take, the identity of alter, and his relation to ego, will establish whether interaction is possible or obligatory. For example, following a death in the family, there is a specific sequence of persons who must be informed. (Sacks' example.)

Personnel include the audience as well as the receiver. The presence of others can, wherever there are options, weigh the selectors differently, according to whether one wants to conceal or display them to others. Thus in a medical laboratory, technicians employed more formal and deferential speech to doctors when the supervisor or patients were present. In public the relation doctor-technician takes precedence over familiarity.

We indicated in Section II that there are formal constraints on address. The rules for reference to third parties are more complex, for they are related both to the third party and to the addressee. In the American system, where the personnel present exchange FN, and are adults, they may regularly omit T in reference to third parties whom they normally address with TFN or TLN. If an addressee is lower in age or rank, e.g. a child or employee, and uses T to the referent, then T is used by both parties in reference. Thus "Daddy" might be used in addressing a child. Emily Post recommends that women refer to their husbands as TLN to inferiors in rank or age, "my husband" to strangers, and FN to friends "on the dinner list!" (1922, p. 54). The friend, however, cannot necessarily address the husband by FN (presumably some familiarity criterion was in use). "It is bad form to go about saying 'Edith Worldly' or 'Ethal Norman' to those who do not call them Edith or Ethel, and to speak thus familiarly of one whom you do not call by her first name, is unforgiveable."

When the addressee is equal or slightly superior in rank, and thus eligible for receiving confidences (Slobin and Porter, in press), when they share statuses which exclude the referent party, emotion towards the referent may be revealed. These constraints apply in particular to pejorative or affectionate nicknames towards persons addressed with TLN.

To the extent that the referent and addressee are alike, there is an implication of deference to the addressee in the form of reference selected. In the Japanese system of honorifics and "stylemes" (Martin, in Hymes, 1964) both the terms for the referent and the verb suffixes are altered by deference, i.e. by selectors of relative rank, age, sex, and solidarity. In the most polite style, dialect forms are absent and the suffixes are employed. Children of eight or nine learn first control over reference, but still employ dialect forms freely and do not differentiate age of addressees by the "stylemes" (i.e. linguistic markers) of polite speech

(Horikawa et al., 1956). Possibly there is in Japanese, as in English, a rule by which reference employs honorifics when a child is addressed, so it becomes the normal name for the referent.

Deference is undoubtedly a social feature present in all sociolinguistic systems to some degree. The most elaborate structural forms are evidently those found in the Far East. Geertz has made an elaborate description of *Prijaji* speech etiquette in Java, and shows its relation to other forms of etiquette (1960). It is he who uses the term "styleme" to refer to affixes and function morphemes governed by co-occurrence restrictions, in contrast to honorific vocabulary that is more sporadic.

Language choice itself, rather than stylistic alternatives, may be governed by addressee features of rank, age, and solidarity. Rubin's (1962) characterization of the alternation between Spanish and Guarani in Paraguay, according to addressee, nearly matches Figure 2, with V = Spanish, and T = Guarani.

Familiarity entered into several of the address rules in Section II. Familiarity increases the probability that an addressee will be talked to, and for this reason familiar interaction is likely to be marked by many forms of ellipsis at all levels, unless some setting or deference constraints interfere. Omissions of subject and modal follow this pattern in English, as a form of syntactic ellipsis.

When an addressee in the Two Person Communication game is a friend, the selections among nonsense forms or colors are coded more efficiently, even though there is no feedback. In studies of sorority girls, comparing speech to friend and non-friend addressees repeatedly revealed a contrast in the time to describe objects when the speaker saw one and the hearer an array. The friends were both more succinct and more successful. Only in part was this difference due to reference to obviously private experience--e.g. "It's the color of Jan's new sweater." Most conspicuous was the contrast between technical descriptions to non-friends, and metaphorical description to friends, e.g. "It's an elephant doing the push-ups." The striking feature of these metaphorical descriptions is that they are very successful even when a non-friend encounters them, so the question arises, why not use metaphor to strangers? Two possible explanations need testing: possibly the use of metaphor seems self-revealing; clearly our formal educational system downgrades metaphorical forms of description. The contrast between Brent and Katz' (1967) college students and Job Corps Negroes illustrates the latter fact; given geometrical forms, descriptions much like our familiar speech were given by the less educated subjects.

It is a common feature of interaction between two persons that if the parameters of speech are different, they become more similar during the interaction, so that a given person's speech may vary depending on the speech features of the addressee. This phenomenon has been noted in the production features of rate, durations, and silence (e.g. Matarazzo, et al. 1964), and is clearly the case for such features as lexical selection and syntax in addressing children. Ramanujan has commented that Brahmins adopt stereotyped non-Brahmin speech when addressing non-Brahmins; address to children is also likely to be stereotyped. If in fact the similarity is an effect of the speech of alter, it should increase during the course of a long interaction; if it arises purely from stereotypes, it may remain unchanged.

Where there are really large code differences, there must be some regularities in the control over the code to be used, if indeed both are to seapk the same. It might be that the more powerful controls the code choice, in cases where setting or topic are not determinant.

If both persons know both codes, deference might be realized either by the adaptation of the lower person to the higher's preference or by respectful avoidance of imitation, "keeping in one's place." Cross-cultural research and experimentation could locate social prediction of which party changes more, and how he changes (Grimshaw, in press).

B. Situation

A situation refers to any constellation of statuses and setting which constrains the interaction which should or may occur--what Berker and Wright (1954) call the "standing behavior patterns." A situation is, like a status, a cultural unit, so that ethnological study is necessary to determine classes of situations.

At the university, a class is a situation. From the standpoint of the authorities, the criteria include the presence of an authorized instructor, students, and an approved time and place. From the standpoint of the instructor and students there are strong constraints on function and on topical relevance.

Recently a student and faculty strike at the University of California brought these criteria to light. Instructors varied in which features of the definition they suspended in their effort to meet their obligations to the students but not to the university administration. Some met at a different time, others at a different place. Some used the same setting but discussed strike issues or public affairs. When the administration threatened to fire instructors who "failed to meet their obligations" it was not at all clear whether they used a minimal or maximal set of criteria.

Situation is most clearly defined when there are jointly dependent statuses and locales: church and priest, school and teacher, store and salesgirl, bus and driver, restaurant and waitress, plane and stewardess, clinic and physician. If the same personnel encounter each other elsewhere, for instance at a baseball game, address terms (as distinct from attention-getting terms) may remain the same, but everything else about the interaction is likely to change.

If we examine these clear cases, we see that there are constraints of expected activities, rights, and obligations, and that there are in several cases clearly defined speech events, such as the church service, the classroom lecture, the order to the waitress, the welcome, oxygen lecture, and so on of the stewardess, the medical history in the clinic. Both the activities and the speech events are likely to be specific to the locale, though we might conceive of asking some information questions of the teacher or physician when they are off duty.

Because the activities and speech events have sequencing rules, they may be demarcated into discourse stages. The boundaries may be marked by routines or by code changes. After a church service, priest and parishioner may exchange personal greetings as friends, the priest using a radically different style than in his sermon. After a formal lecture, the opening of the floor to questions in cases of diglossia is signalled by a switch to the "lower" code, e.g. colloquial Arabic or Guarani (Ferguson in Hymes 1964), Rubin (in press). These are predictable discourse stages, and in this respect differ from shifts which are at the option of the participants. Blom and Gumperz (in press) mention that local residents of Hemnisberget might use standard Norwegian when enacting their roles as buyer and seller, but if one wished to initiate a private conversation on personal matters he would shift to the local dialect. Even in this case, the norms might be to follow the above order, except in emergencies.

One strategy in identifying situations is to look for folk terminology for them, such as church service, party, interview, picnic, lunch break, conversation, chat, class, discussion. The status-oriented interaction between customers and sales personnel or waitresses has no name, and the interaction arising from statuses in work organizations has no folk name, in English. If there is some independent and reliable way of identifying situational categories, then the difference between the named and the unnamed is important, for it suggests the named situations enter into members' accounts.

Restricted languages illustrate situational constraints vividly. In hamburger bars and short-order cafes in the United States, abbreviated forms of speech appear. In these settings, there is a premium on speed in transmission of orders from the waitress to the cook. The number of alternatives is semantically limited, with certain high probabilities. In the ordering one can see evidence that the code has been reduced almost to the minimum required for efficiency, within the structure of English syntax, by radical ellipsis. In studies by Brian Stross (1964) and by Marion Williams (1964), corpora were collected in a range of local settings:

one	one hamburger
two sweets	two sweet rolls
barbeef	barbecued beef sandwich
boil five	five-minute boiled egg
burger without	one hamburger without onions
beeny up	bacon and eggs, sunny side up
bacon and	bacon and eggs (diff. locale)
one M. O.	one hamburger, mustard only
L. T. plain	lettuce and tomato salad
ham and over rye	ham and eggs over, on rye
five squirt three	5 coffees, three with cream

Stross pointed out that the underlying rule for all of these instances, except the last, is (Number) + (Name) + (Describer). This kind of syntax appears in normal English in phrases like "five hamburgers without onions." The odd appearance of the restricted syntax arises from the optional omission of any of these elements, and from the appearance in the describer class of items like "and" and "without" which normally do not appear alone. It is hard to think of any way of omitting the function word rather than the noun, in "without onions," but in the case of "ham and eggs" it seems possible that the form could be "ham eggs." This would violate the general rule that the last item be a describer and obviously subordinate. Note that when there is an adjective-noun phrase in the gloss, the two can be compressed into one word, by making the adjective a prefix, as in "barbeef."

The abbreviation devices summarized by Stross include loss of segments (burger); use of initials (especially to replace conjoined nouns); loss of name (of most probable item); container for contents (cup for spaghetti); preparation unique to an item (boil for egg).

The last item on the list does not follow the structural rule. It comes from a trucker's cafe, in which the corpus was kitchen talk rather than waitress ordering. This corpus was distinguished by a lot of colorful slang, much of it from vintage army usage and pejorative in tone. The efficiency pressure did not take priority here, and the structural rules were therefore different. Single word examples are "wop" for spaghetti, "pig" for hot dogs, "rabbit" for salad, "grease" for fries. Longer units of the slang type are "burn a cow" for two well-done hamburgers, "bowl a slop" for a bowl of the soup of the day, "cap'ns galley" for pancakes topped by egg. That abbreviation did not dominate is suggested in cases which the other rule would reduce: "one order grease," "one wop with balls." In the last case humor wins out over brevity, which would yield "one wop with" or even "wop with." "One green bitch with T.I." for green goddess salad with thousand island dressing might be reduced to "green T.I." or bitch T.I."

We have observed restaurants in Switzerland, and in London, and have found similar forms of restricted language only in London's "Wimpy bars." Here the forms are so similar to American hamburger places that one can guess that some of the language travelled with the product. In the interchanges in other restaurants no evidence of radical ellipsis was found. One reason may be that observations were made within kitchens, and as we have seen in regard to the trucker's cafe, kitchen talk evidently is not constrained by the same brevity pressures as orders to the kitchen.

The mere cataloguing of cultural units is not likely to bear much fruit unless the features of the situations which effect sociolinguistic rules can be identified. It is common to speak of "formal" situations, but it is not clear what makes a situation formal. Labov has suggested that degree of self-monitoring constitutes a dimension permitting alignment of situations on a continuum. Work or status-oriented situations vs. person-oriented situations provides another contrast. In the first case there is likely to be some criterion of achievement in an activity; in the second the focus of attention can be turned to selves and to expressions of personal emotions. But these differences are essentially differences in function.

C. Functions of interaction

1. Criteria

Firth (Hymes, 1964) was among many who sought to identify the functions of speech. He included phatic communion (solidarity); pragmatic efficiency (accompanying work); planning and guidance; address; greetings, farewells, adjustment of relations, and so on; speech as a commitment, (courts, promises). Primarily his view of function was the social value of the act.

To a psychologist, function is likely to be viewed from the standpoint of the interacting parties, either the sender or the receiver. Soskin has played tapes to listeners and asked them to report what they would say and what they would think. This method assumes that function is effect. It is close to Blom and Gumperz' (in press) criterion of social meaning.

A second method is to analyze actual instances of acts, and infer whether the receiver's response satisfied the speaker, either from his overt behavior or by questioning him. This method includes action, response, reaction. It is derived from Skinner's (1957) theory that speech is operant behavior which affects the speaker through the mediation of a hearer. Feedback and audience consistency presumably "shape" effective speech in the normal person. In this method, function is identified by classes of satisfactory listener responses.

If intent is imputed to a speaker on the basis of some features of the content or form of his speech, a third form of functional analysis appears. This, of course, is the method of latent content analysis, (e.g. Katz, 1966).

The following set of function categories was devised to account for the initiation of dyadic interaction, on the basis of a corpus of instances of action, response, and reaction (Ervin-Tripp, 1964):

a. Requests for goods, services, information.

b. Requests for social responses (e.g. recognition, aggression, dominance, self-abasement, nurturance, friendship). Responses that reinforce these acts include applause, smiles, laughs, hugs, angry retorts.

c. Offering information or interpretation.

d. Expressive monologues.

e. Routines. Greetings, thanks, apologies. Limited-alternative utterances marking units in speech events or rectifying deviations from norms.

f. Avoidance conversations. Occur only because the alternative is unpleasant or satiation has occurred. e.g. exam-time breaks, bus-stop discourse.

2. Requests

Soskin and John (1963) devised a category system based on a combination of structural and semantic features. We can use their system to sub-classify each of the above functional categories. For example, the following all might be requests for the loan of a coat:

"It's cold today." (structone)
"Lend me your coat." (regnone)
"I'm cold." (signone)
"That looks like a warm coat you have." (metrone)
"Br-r-r" (expressive)
"I wonder if I brought a coat" (excogitative)

One simple way to examine requests is to compare regnones, in which the request function is explicit, with all other categories, in terms of social distribution. In a term paper, Bessie Dikeman and Patricia Parker (1964) found that within families indirect request forms dominated between equals, almost half were regnones when seniors addressed juniors, and from juniors, regnones dominated. Examples from their paper are these:

> "Where's the coffee, Dremsel?" (it is visible).
>   (to wife) [gloss: bring me the coffee]
> "Is that enough bacon for you and Thelma?" (to husband)
>   [gloss: save some for Thelma]
> "It's 7:15" (to daughter)
>   [gloss: hurry up]
> "Mother, you know I don't have a robe. Well, we're
>   having a slumber party tomorrow night."
>   [gloss: buy me a robe]
> "Oh, dear I wish I were taller" (to adult brother)
>   [gloss: get down the dishes]

In occupational settings, by contrast, requests to subordinates were more often regnones, and often direct imperatives.

Request and persuasion are functions in which it can be expected that a wide range of variation in realization will occur, as a reflection of social features. Since they require action on the part of alter, the obligations and privileges in the relation between the parties are likely to lead to subtle variations in request. These can take the form of pragmatic neutralization, in which the function is masked and the speech appears not to be a request. Or, though a "regnone" is employed, it can vary in level of politeness in terms of syntax, lexicon, and intonation. In English, imperatives are less polite than modal statements, which in turn are less polite than modal questions ("could you close the door?"). "Please" may or may not add politeness, depending on its location and intonation. Non-falling intonation is more polite than falling. We might expect to find pragmatic neutralization either in a situation of deference where the requestor was reluctant to ask at all, or in a situation of familiarity where the implicit message would be readily interpreted and mutual nurturance is assumed. In the restaurant studies mentioned earlier, "please" was used only for requested acts extraneous to duties.

We can expect that where variant address forms exist, they might alternate in request situations. Milla Ayoub (1962) in a discussion of bi-polar kin terms in Arabic, pointed out that in addition to proper names, a mother could call her son by either of two terms that also can mean "my mother." When a parent wishes to cajole or placate a child, but not command him, he uses these bipolar terms. This is particularly the case with sons. They are never used in direct commands.

In discussing current address practices in the Soviet Union, Kantorovich (1966) mentioned that friends might switch from "ty" to "vy" with first name and patronymic when help was asked.

3. Approval-seeking

In human communication, as in lower primates (Diebold, in press) many of the signals for what we have called "requests for social responses" are gestural or paralinguistic. Rosenfeld (1966) found among American males that liking was related to the following factors in the speaker's behavior: Long sentences, few self-words, and high reinforcement of the speech of alter through head nods and verbal routines. Among women, frequent initiation of utterances, many sentences per speech, many speech disturbances and false starts, many questions and many words referring to alter, and reinforcement by nods produced greater liking by strangers. Rosenfeld also found which of these features were subject to conscious manipulation under instructions and role-playing: volubility, frequency of speaking and length of sentences, and more speech disturbances, as well as verbal reinforcing routines. The major omission is the semantic component (the kind Dale Carnegie discusses) of orienting the content of the interaction to alter rather than self. Probably address forms change also, among friends, when affiliative functions are primary. Tyler, (1965) for example, suggests that certain address alternatives in the Koya kin system are employed when cross-cousins engage in the joking relationship which is their privilege. We noted earlier that such alternates might even be used in deferential address with familiar addressees, for example "Dr. S." rather than "Dr. Smith" from technician to physician when outsiders were absent.

There may prove to be classes of functionally equivalent responses by alter, such as head nods and brief verbal routines both occurring as options in response to the same stimuli. The identification of these response classes in turn can provide a criterion for recognizing the speech variables which elicit them from alter, and thus provide grounds for classifying "approval-seeking behavior," more objective than the intuition of judges. Of course whether there is any empirical value in these categories depends on whether they enter into speech rules consistently.

4. Effects of function shifts

Functions can enter into rules for the selection of settings by participants, the selection of addressees, and formal changes within the interaction.

> "Oh my back, it's killing me today. I can hardly move."
>
> "Yeah, it must be the weather. My leg's been aching all day."
>
> "I was supposed to get a shot of cortisone today, but my husband couldn't take me to the doctors."
>
> "I hurt my leg in the army. . . . (long description)
>
> "Oh. Well, I must get back to work."

Something went wrong in this interaction. The woman did not, in effect, respond to the man's story of woe, and terminated the conversation.

The collection of large corpora of natural sequences might not yield enough such instances for the analysis by classification; a role-playing method might be one approximation. We might find that responses to statements of physical distress take the form of: inquiries of cause, routine sympathy expressions, offers of help. In this case, none of these happened; instead, the addressee himself made a statement of physical distress, and pre-empted the floor. Watson and Potter (1962) say that when the focus of attention of conversation is tied to self, "interaction is governed by rules of tact." Presumably these include certain obligations of response and limitations on inquiry topics. Only a method which allows gathering data on appropriate responses and testing the consequences of inappropriate responses can identify what these rules might be.

In the course of any given discourse segment, we can effect to find changes in the functions, which in turn affect form. These changes will arise from:

1. Sequencing rules within the speech event.
2. Changes in the activity, if any, accompanying the interaction (e.g. a ball game, dinner preparation).
3. Disruptive events such as the arrival of new personnel, accidents like bumps, sneezes, phone calls which require routines to right the situation.
4. Shifts arising from unexpected responses of alter,

leading to changes in tactics, or a change in function.

5. Function satiation. Presumably functions oscillate in patterned ways in stable groups.
6. Topic-evoked shifts in functions. Under the impact of instructions or of associative dynamics, the topic may change in the course of the conversation. These changes can alter the available resources for the participants and thereby change their intent. If the topic shifts from child-rearing to economics, for example, a bachelor may find he has greater resources of display of knowledge and receiving recognition. He may speak more, use more technical vocabulary, perhaps even to the point that listeners do not understand. There were many such instances in studying the speech of bilinguals, in which topic and language were controlled by instructors (Ervin, 1964; Ervin-Tripp, 1964, 1967).

Blom and Gumperz (in press) found that among university trained villagers, many features of standard Norwegian appeared when topics shifted from local to non-local. But they found the change depended on the message. In the offering of information, speakers with a large repertoire of speech alternatives can maximize credibility by adopting the most suitable role. Thus discussion of university structure might elicit use of more standard Norwegian forms than would gossip about instructors, where student speech features would be adopted, especially those shared with addressees.

As functions change, address too may change through a conversation. David Day described in a paper changes when an argument occurred in a class regarding an instructor's views of the student's beliefs. Address progressed from FN to Dr. LN to Professor LN. In comments with other students as addressee, LN was used in reference to the instructor, in front of him. Concurrently slang decreased.

"When cursing, many people who customarily use "ty" suddenly switch to "vy," and many who are on a mutual "vy" basis switchh to "ty" (Kostomarov, 1967).

D. Rules for switching

We have emphasized throughout this paper that linguistic interaction is a system of behavior in which underlying functions are realized through an organized set of output rules within a social situation. If the function requires conveying an explicit message with informational content, some semantic information is presented in the alternatives selected. Other alternatives require the representation of social information.

In addressee-dominated rules like those in Section II, the effects of function switching can be represented as transformations upon the outputs of the addressee rules. They may take the form of simple replacements, e.g. if familiarity exists, different names may be employed as a direct representation of varied functions. Thus a node or selector for familiarity and for function is added to the branching rules. Tyler's rules (1966 are of this type.

Blom and Gumperz (in press) have suggested that metaphorical switching simply consists of treating the addressee as though his social features were different. In this case, the rule acts upon the selection points. In the case of Dr. Poussaint, hostile intent was represented in the selection of Adult - rather than Adult + at the first selection point. Presumably this possibility suggested itself by the existence of a traditional southern system of address to Negroes in which all but the very old (aunty) were addressed as children. When Sacks asked his students to play the role of boarders with their families in vacation, their silence, politeness of address and request, and withdrawal from gossip and semantic ellipsis in conversation were interpreted by their families as evidence of sickness or hostility.

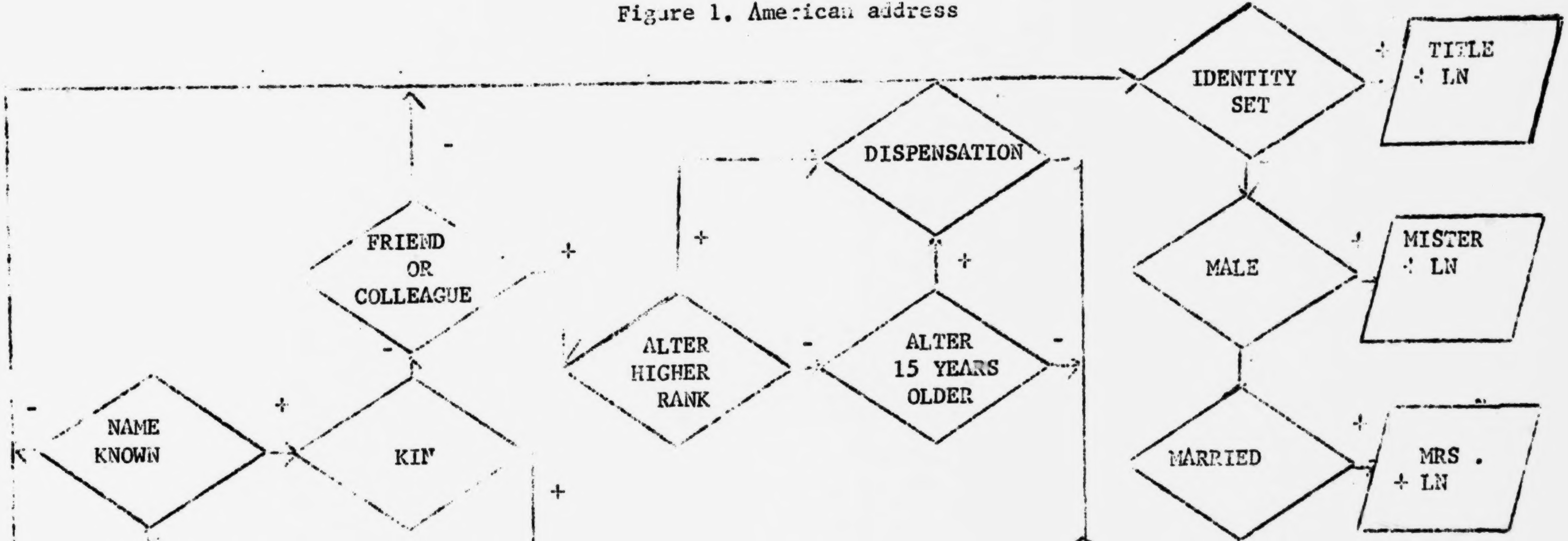
The Russian example implies that a simple transformation upon the output forms can express hostility; on the other hand, the inversion may be a consequence of transformation of selection features, making the friend a non-friend, and the formal associate an inferior. Such general rules are a necessity if familiarity is absent, since they permit the interpretation of new instances, on the basis of the hearer's general knowledge of the system of sociolinguistic rules.

"Rules" could refer to structures for generating or interpreting speech, to reports of beliefs about practices, or to standards of correctness. We have given examples of all three kinds of rules, not always clearly distinguishing them. Labov's Index of Linguistic Insecurity (1966) compared the last two.

Behavioral rules and reports about behavior are likely to be systematically different. If the norms contain a probability or frequency factor, speaker's beliefs are, instead, categorical (Labov, 1966). Beliefs about the social selectors in sociolinguistic rules are more likely to include features of personnel, since categorization devices realize these features, than to note functional variation. Syntactical variables are not remembered (Sacks, 1967) beyond the time needed for decoding, unless they are markers, helping us classify the speaker. In multilingual communities phonolgical, syntactic, and semantic shifting is not observed (Gumperz, 1964, 1967). Even borrowed vocabulary is unnoticed by members, if values oppose borrowing (Blom and Gumperz, in press). Some speakers cannot remember the language in which they just spoke, let alone report it to an interviewer.

These phenomena are not merely grounds for distrusting members' reports. Just as address to a relative (Tyler, 1966) is affected by more than the semantic dimensions of reference, so the act of describing even to oneself, is a product which could realize a variety of functions. Member's reports are likely to be as sensitive to social variation as any speech act mentioned in this paper, and therefore prove as amenable to study.

Figure 1. American address


IDENTITY SET
TITLE + LN
DISPENSATION
FRIEND OR COLLEAGUE
MALE
MISTER + LN
ALTER HIGHER RANK
ALTER 15 YEARS OLDER
NAME KNOWN
KIN
MARRIED
MRS . + LN
+
-

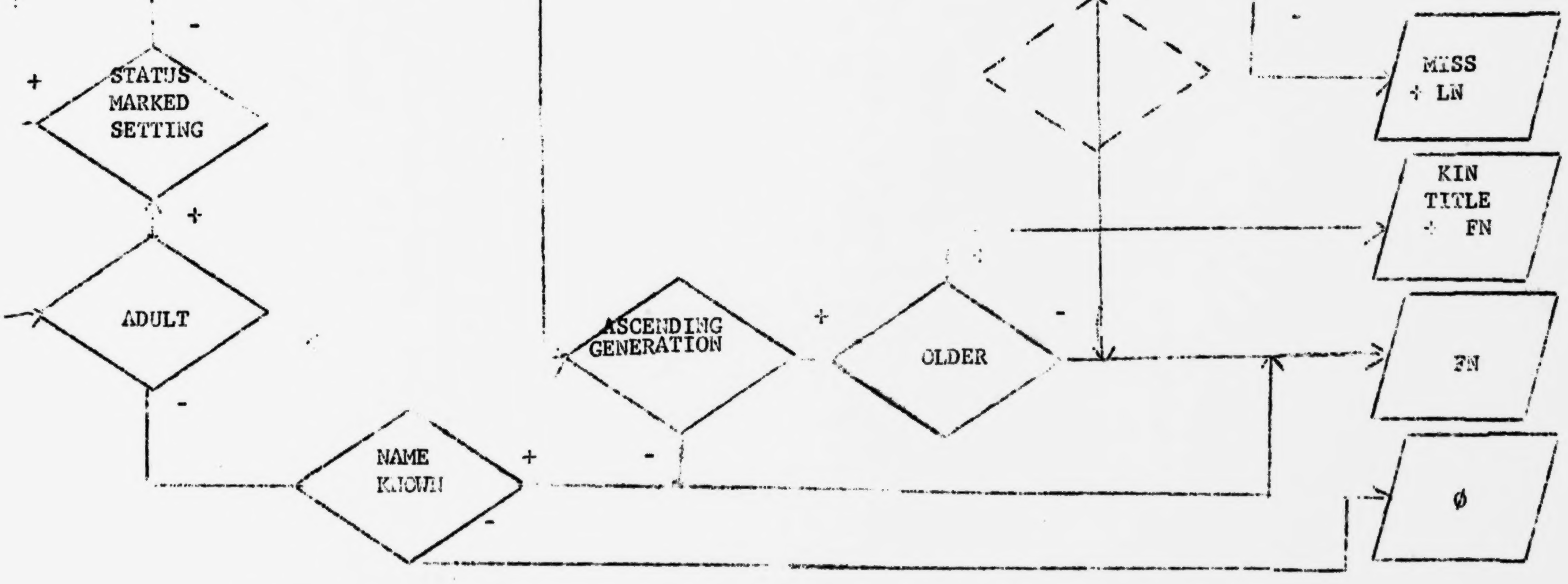
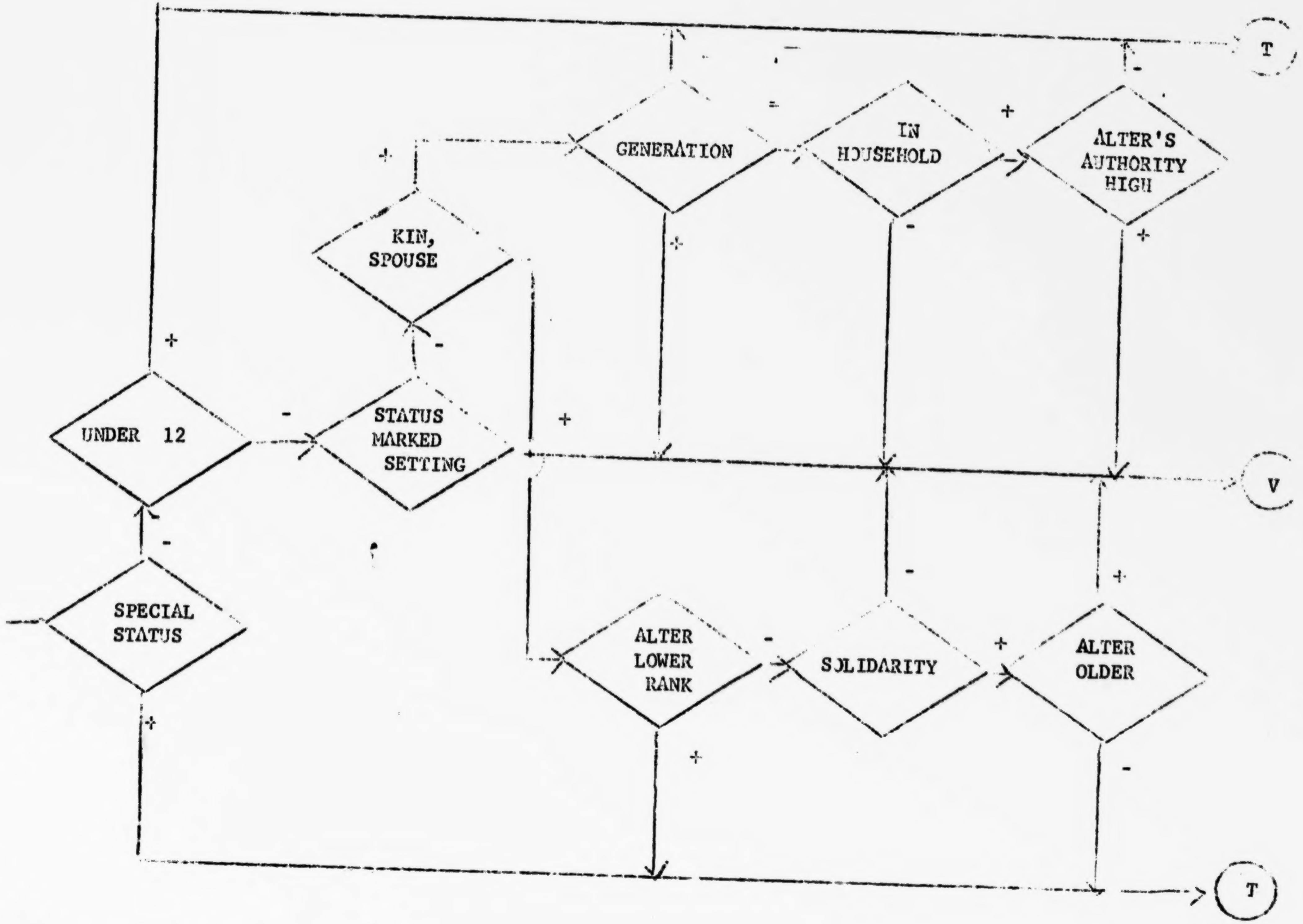

STATUS MARKED SETTING
ADULT
NAME KNOWN
ASCENDING GENERATION
OLDER
MISS + LN
KIN TITLE + FN
FN
ø
+
-

Figure 2. 19th century Russian address


SPECIAL STATUS
UNDER 12
STATUS MARKED SETTING
KIN, SPOUSE
GENERATION
IN HOUSEHOLD
ALTER'S AUTHORITY HIGH
ALTER LOWER RANK
SOLIDARITY
ALTER OLDER
T
V
T
+
-

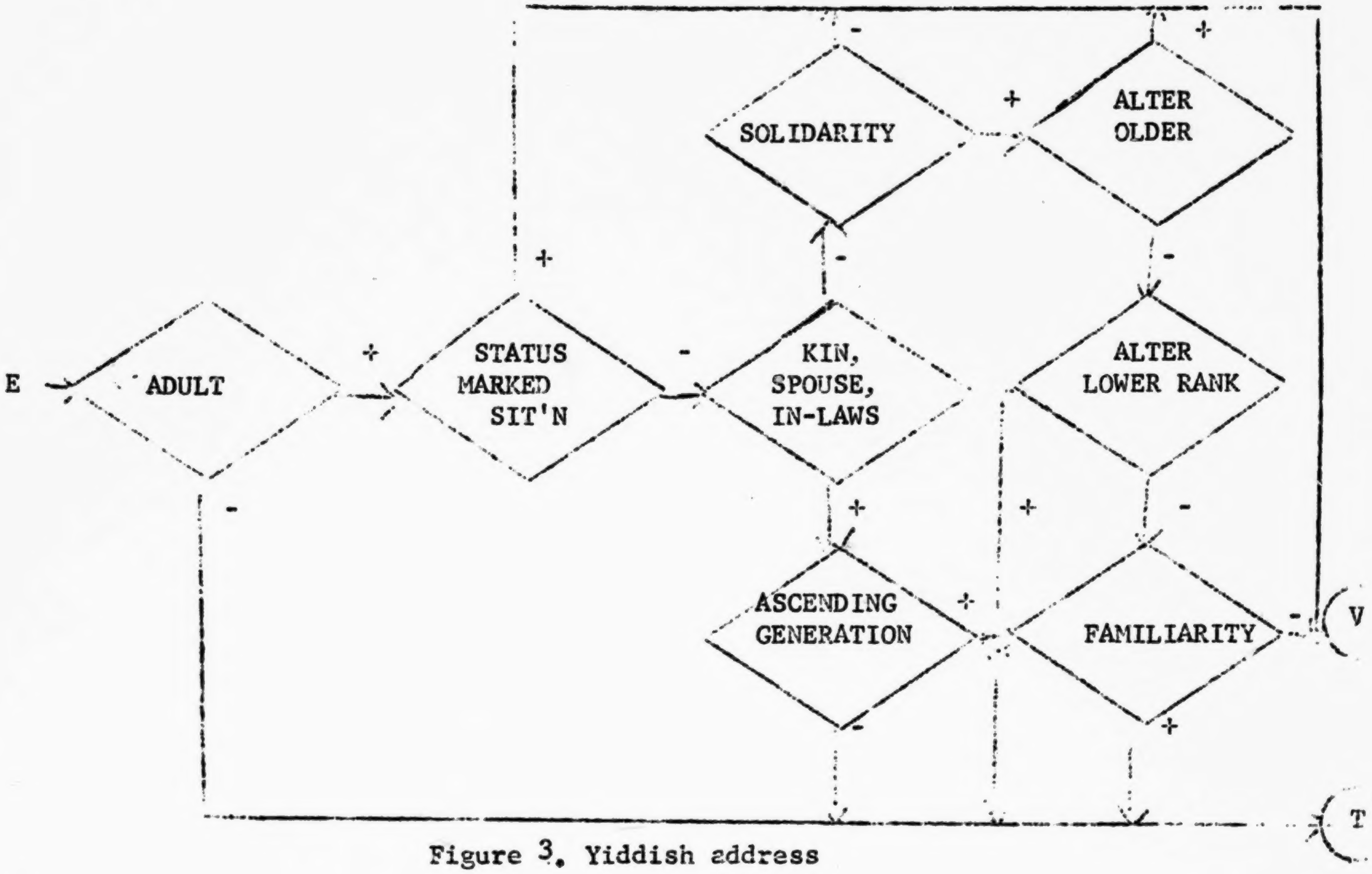

E
ADULT
STATUS MARKED SIT'N
KIN, SPOUSE, IN-LAWS
SOLIDARITY
ALTER OLDER
ALTER LOWER RANK
ASCENDING GENERATION
FAMILIARITY
V
T
+
-

Figure 3. Yiddish address

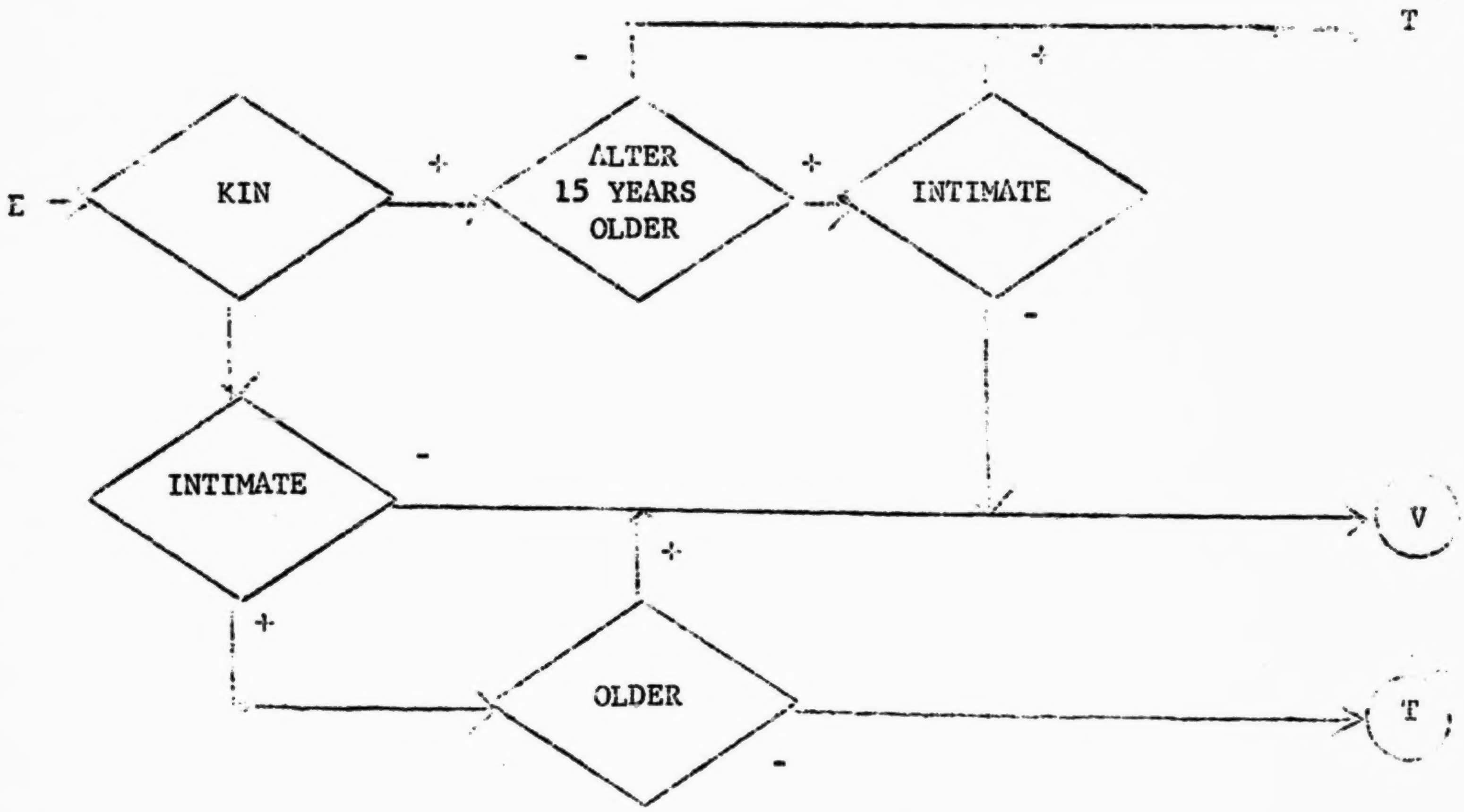
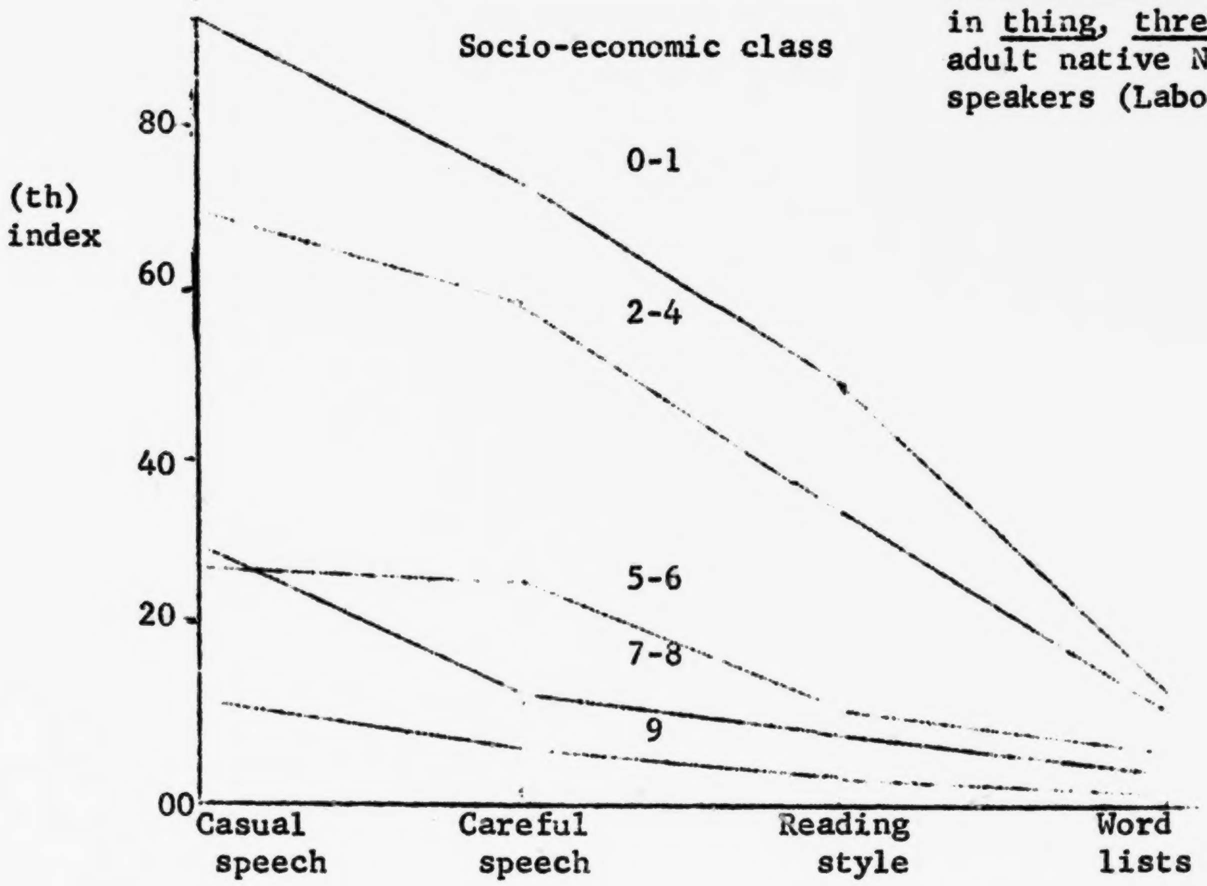

E
KIN
ALTER 15 YEARS OLDER
INTIMATE
INTIMATE
OLDER
T
V
T
+
-

Figure 4. Puerto Rican address

Figure 5. Class and style stratification of (th) in thing, three, etc. for adult native New York City speakers (Labov, 1966)



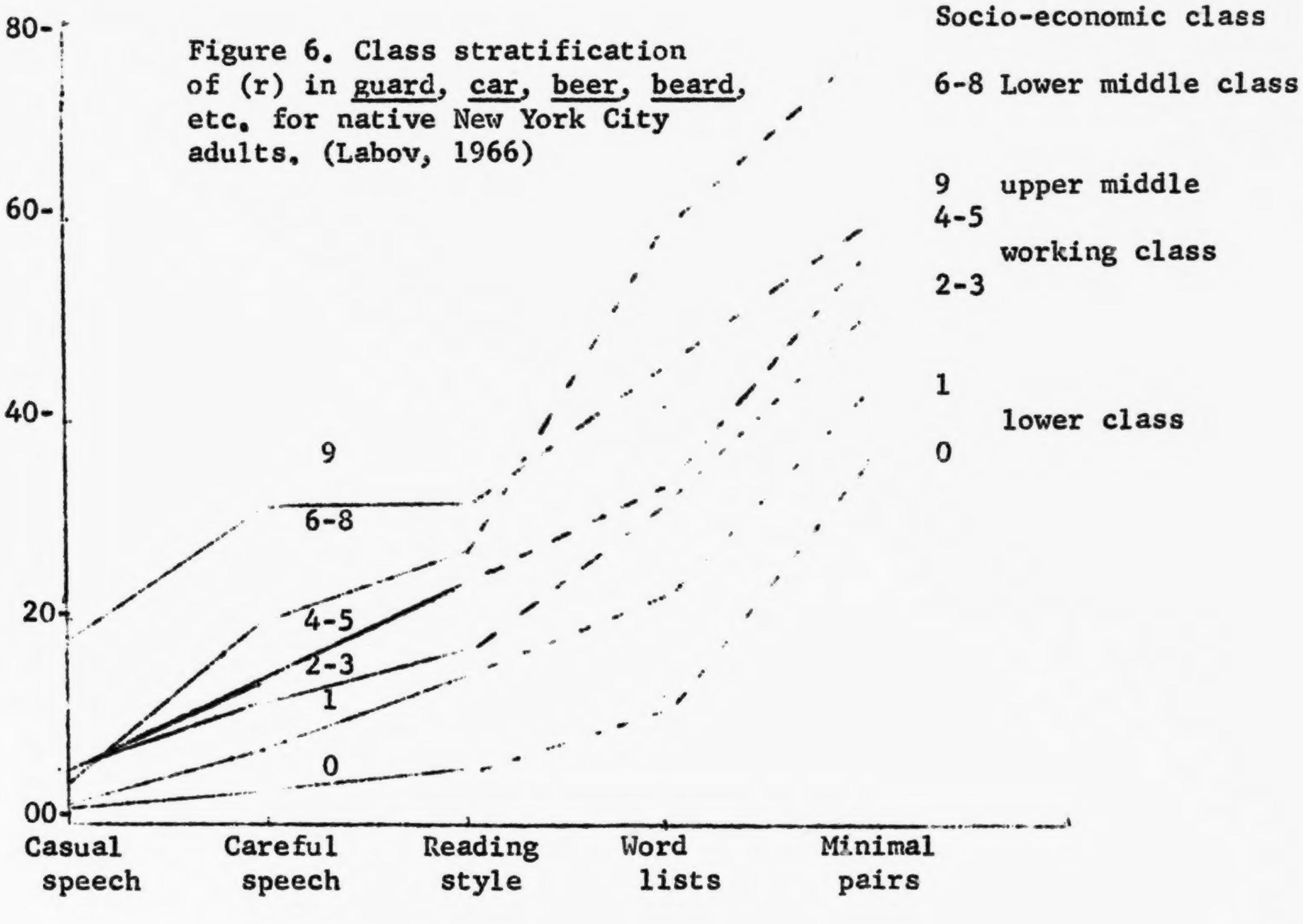


Figure 6. Class stratification of (r) in guard, car, beer, beard, etc. for native New York City adults. (Labov, 1966)

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